Personnel

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In This Issue

Integrating Negro Worker

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Safety Training

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Workers Judge Management

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Reducing Absenteeism

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Apprenticeship System

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Part-Time Workers

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War Production Training

AMERICAN MANAGEMENT ASSOCIATION
AMA

SEPTEMBER, 1942

THE AMERICAN MANAGEMENT ASSOCIATION

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CONTENTS ☆ SEPTEMBER, 1942

VOL. 19 No. 2

"STRICTLY PERSONNEL" . . . . . Page 454

THE TECHNIQUE OF INTRODUCING NEGROES INTO THE PLANT *By Herman Feldman* . . Page 461

WHAT'S WRONG WITH SAFETY TRAINING? *By Alfred M. Cooper* . . Page 467

THE WORKERS JUDGE MANAGEMENT *By Harrison F. Dunning* . . Page 474

HOW WESTINGHOUSE REDUCES ABSENTEEISM *By T. O. Armstrong* . . Page 480

CASE STUDY OF AN APPROVED APPRENTICESHIP SYSTEM *By O. L. Harvey* . . Page 489

PIONEERING THE PART-TIME TRAIL . . . . . Page 498

TRAINING FOR WAR PRODUCTION WORKERS . . . . . Page 503

THE PERSONNEL BOOKSHELF . . . . . Page 509

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..... Strictly personnel

"Do Not Disturb"

"NIGHT WORKER KILLS MAN DISRUPTING SLEEP" —headline in a metropolitan daily, July 20, 1942.

In the topsy-turvy world of the night-shift worker, the question of how to sleep undisturbed in the daytime is taking on the proportions of a social problem. Today more than a third of the nation's war workers are on night shifts. Night workers live on such an unnatural schedule anyway that even if there were no noises to upset them they would probably have difficulty in obtaining proper rest. Blaring radios and shouting children can make their life unbearable.

However, steps are being taken in many war-industry areas to appeal to the patriotism of the neighbors to establish quiet zones around the homes of night-shift workers. In Paterson, N. J., war workers on the night shift display special flags outside their homes, and in other areas they are identified by stickers on their windows. The theory is that even the most raucous neighbor will think twice about waking up a war worker who needs plenty of sleep if he is to maintain production.

★

Discharge Policy

When an old-time foreman wanted to fire a man, he fired him —and the man stayed fired. Whether it was ever desirable to place so much authority in the hands of a minor supervisor is debatable. Certainly, since the advent of the Wagner Labor Act it has become downright dangerous. Far from staying fired, the man may turn up tomorrow demanding reinstatement with back pay and drawing unfavorable publicity on the company in the process. Thus a firm may find it has acquired a reputation for being "anti-labor" merely because one of its foremen lost his temper.

Today's foreman, as Leonard C. Bajork points out in the June issue of *Supervision,* is required to be almost a superman. The job calls for a production expert, a labor relations expert, and an expert in the intricacies of the Wagner Labor Relations Act.

Firms which find it impossible to hire very many such paragons would do well to consider the five-point program Mr. Bajork suggests for curbing the power of the foreman:

1. The causes for which an employee may be disciplined or discharged should be listed in a well-written pamphlet or handbook.
2. Foremen should be required to give two advance notices or warnings before discharging an employee.
3. Every dismissal should be reviewed by a higher executive.
4. Every employee should be granted the right of appeal.
5. An interviewing technique should be developed whereby all dismissal cases are reviewed before the employee leaves the premises or before he receives his final pay check.

Rest and Meal Periods

Five to 10 minutes' rest in the middle of the work spell means a 5 to 10 per cent increase in output, British authorities report, and their findings are based on 18 years of investigation.

This fact is cited by the Women's Bureau of the U. S. Department of Labor in a recent bulletin on the health of women war workers. Workers, the Bureau points out, cannot maintain a speed-up for extended periods. If the work trick is four hours long, the employee will pause for several minutes every hour; where scheduled rest times are provided, however, the time lost through unauthorized pauses is reduced.

As to lunch periods, the Bureau proposes this test: A lunch period is too short if it does not give a worker time to leave the workroom, wash, eat a well-balanced lunch, and have a few minutes' leisure afterward. "Half an hour is sufficient," the bulletin declares, "if washing facilities and lunchrooms are conveniently located. If the lunchroom is inadequate to serve the expanding force with dispatch or if it is distant from the workroom, additional time should be allowed or provision made for carts with hot food to serve lunches at convenient points *outside of workrooms.*"

Another point the bulletin makes is that workers handling harmful substances or exposed to poisonous fumes or dusts should be given extra time before lunch for thorough washing. In some cases it may be necessary to allow time for changing work clothes.

Twenty-one states and the District of Columbia require employers in manufacturing occupations to allow time for meals or rest or both: Arkansas, California, Delaware, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Utah, and Wisconsin. The period specified varies from 30 minutes to one hour, and all the states listed except California, Indiana, Nebraska, Nevada, New Mexico and Wisconsin specify a maximum number of hours, usually five or six, beyond which no employee may work without a pause for rest or for a meal.

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Cure for Industrial Slackers

One war production plant has hit upon a way of dramatizing the fact that unnecessary absences help the Axis. Employees of the Permold Co., Medina, Ohio, *The Wall Street Journal* reports, are paid in worthless Nazi currency for all time lost *without good reason.* A note in the pay envelope reads:

"The extra pay enclosed is your reward for failing to report for work last week. This money comes from a country that is glad to pay you not to make supplies for our soldiers. When you don't work, you work for the enemy."

★

"Women in War Industries"

Restrictions against the employment of married women seem to be changing more rapidly than any other single employment policy affecting women, Helen Baker, assistant director of the Industrial Relations Section of Princeton University, reports in a recent study, "Women in War Industries." Many companies have not only dropped their rules against hiring married women but are encouraging women em-

ployees who marry to continue on the job. While a few firms still refuse to employ mothers of young children, others feel that women with dependents make the most satisfactory employees, provided the children are adequately taken care of so that the mother need not worry about them nor have to take time off when they are ill.

Some of the other facts Miss Baker brings out in her survey follow:

1. Legislation restricting the employment of women is being suspended for the duration in many cases. Immediately after Pearl Harbor, several states began exempting from such restrictions any company which could show that the hours laws interfered with effective defense production.

2. British experience has shown that the use of women personnel advisers is desirable where a large number of women are employed, and many American companies are adopting the plan. While these companies have not overlooked the general dislike of "company welfare work" and "paternalism," they feel that when production is of such vital importance anything which affects it is properly the province of management. Moreover, women new to industry and faced with many difficult adjustments are not likely to resent a chance to discuss their problems with someone who understands both the requirements of the job and the pressure of home responsibilities.

3. Upgrading of women production workers to first-line supervisory jobs has received definite impetus since December. For the most part, however, little special training is given for prospective group leaders, job instructors, or assistant forewomen.

4. Even with a substantial bonus for the third shift, it is difficult to find enough women who can stand continuous night work, although some do prefer it. Authorities on industrial health agree that night work is bad; they feel that, if women must be used on 24-hour operations, some kind of a rotating schedule may be best for the group as a whole.

5. Lunch periods for women industrial employees vary in length from 15 minutes to one hour. A 30-minute period was allowed by approximately one-half of 62 companies studied last November and was considered the satisfactory minimum by all. Only one-fifth of the companies from which information was secured had a regular rest period for all women production workers, although another fifth had regular rests for women on continuous-operation jobs or work which required close attention. Other companies allowed rest periods as the work permitted.

6. It has been the experience of many companies that an increase in weekly hours of work from 40 to 48 results in a higher absence rate for all employees, and that frequently the increase is greater among women than among men.

7. The small proportion of companies that reported an "equal pay for equal work" policy suggests that the wage differential between men and women is common. A reason frequently advanced was "the custom of the industry" or "the going rate in the community." Others were: "The woman's job is never *exactly* the same as the man's; jobs must be reclassified in some respects when women replace men." . . . "Women require more supervision." . . . "Turnover is higher."

★

In the Family

The practice of offering jobs to wives and relatives of employees called into service appears to be growing. Recently these pages carried a note on the novel scheme developed by The Franklin Square National Bank of Long Island, New York, for providing

employment for some member of the family of each employee inducted. Now the Axle Division of the Eaton Manufacturing Co., Cleveland, is making an effort to recruit the wives of ex-employees in the services.

Letters have been sent out by Eaton to the wives of ex-employees in the armed forces inviting them to apply for positions. Four wives have been hired by this method already, *The Iron Age* reports, and a good many more will probably be taken on later. Underlying this policy is the belief of company officials that ex-employees will be relieved to know their wives have regular incomes.

Some time ago The Franklin Square Bank sent questionnaires to its staff, inquiring as to the status of dependents, fixed expenses, and sources of income. The management hopes to make provision for adequate support of the families of all employees called into service, and it also feels that members of the ex-employees' families will do better work than people entirely new to the organization.

★

Mice and Men

When white mice and canaries, placed in the workrooms as a check on contamination of the air, died before the eyes of the work force, near-panic flamed among the employees of an Akron plant. The cause was a substitute for toluol, used in synthetic rubber.

An immediate appeal to the War Production Board went out from the union. Relayed to the National Committee for Conservation of Manpower in the War Industries by the WPB, the appeal brought immediate action. A conference at which labor, management, government and industrial health authorities were represented was called, and misapprehensions were eliminated. Upon the conference findings, supplemented by further research, the National Committee plans to base a series of small bulletins devoted to the health hazards involved in the fabrication of synthetic rubber, and the methods of controlling those hazards.—*Labor Information Bulletin* 7/42.

★

Priorities in Women's Employment

Alarmed by the threatened labor shortage, some personnel men have gone so far as to recommend that housewives be drafted for war industry. The Women's Bureau of the U. S. Department of Labor, however, points out that action of that sort will not be necessary for a long time to come. The Bureau has formulated a definite policy as to priorities that must be observed in the employment of women workers if this country's labor force is to be effectively used.

First of all, says the Bureau, industry should draw on women with factory experience who have lost employment because of priorities or plant adjustments. For example, it was estimated recently that 150,000 workers on women's clothing, more than three-fourths of them female, were jobless. At the same time another 30,000 workers from the men's clothing industry, three-fourths of them female, were idle in the New York area alone.

After the supply of experienced factory workers is exhausted, the Bureau declares, other unemployed women registered with the U. S. Employment Service should be hired; then, if necessary, the more than 800,000 girls graduating from high schools and colleges.

Only after these supplies are exhausted, says the Bureau, should women

caring for their homes, particularly those with small children, be asked to go into the factory and workshop.

★

Advice on WLB Presentations

Management was recently treated to some plain speaking on the subject of War Labor Board disputes from one of its own representatives on the Board. Speaking before the Silver Bay Industrial Conference, Dale Purves, vice president, J. B. Stetson Co., and associate member of the Board, declared that company presentations have often been "weak, sketchy in factual material, and otherwise undocumented," while union briefs are generally "complete, systematic, factual and exhaustively documented."

Mr. Purves warned management that the Board was not interested in arguments on the principle of collective bargaining, that it has heard all the pros and cons many times before. "Give facts unembellished with oratory and legalisms, as you would like to have them presented to you," he said. "Remember that you are before the WLB, and you have to convince them, not they you." In disputes concerning wages, for example, he suggested that management list all the pay rates from the lowest to the highest, rather than the averages. On the union security issue, he pointed out, the first test is "Will such security help or hinder the war effort?" In general, however, the Board favors maintenance of the union.

Mr. Purves also recommended that management read the recent decisions in the "Little Steel" case, including the statement appended to the decision by Roger D. Lapham, industry member of the Board:

"Management has plenty to learn in dealing with such spokesmen of labor as they are required to deal with. Management must learn a technique and philosophy now foreign to the great majority in its ranks. A suggested motto for management is: 'Get wise and face realities.'"

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Suggestion Boom

New impetus has been given to suggestion systems by Donald Nelson's sponsorship of labor-management committees, and many firms are brushing up their old plans or introducing new ones.

Latest development in this field is the National Association of Suggestion Systems. At the organization meeting held in Chicago recently, 28 large companies, which together employ more than half a million people, were represented. A temporary organizing committee was named with E. S. Taylor, of the Pullman Company, as chairman and F. A. Denz, of United Air Lines, as secretary. A. G. Nordholm, chief of regional representatives of the War Production Drive Headquarters, Washington, approved the new association and urged that outstanding employee ideas be forwarded to Washington for consideration for WPB awards (see PERSONNEL, July, 1942).

Formation of a national association was first proposed by Mr. Denz, who is manager of the UAL Employees' Suggestion Committee. In his letter announcing the project, he pointed out that the UAL committee has made it a practice to exchange suggestion-plan material with other companies, and has found doing so well worth while. "In this way," he said, "we have been able to improve on many features of our plan. New slogans, posters, thought stimulators, and many other features have been called to our attention."

Incidentally, UAL's own system has one novel feature which other companies might consider. This is the *Employees' Suggestion Bulletin,* which the company issues periodically. In it are listed all suggestions submitted—without the suggesters' names, of course—and the reason each did or did not receive an award.

★

War Babies

If housewives are going into war factories by the millions—and there seems to be little doubt that the trend has already started—where are they going to park their children? Industry, government, and social agencies seem pretty well agreed that the answer is "war nursery schools."

WPA has already allocated $6,000,000 for projects of this sort, and it is expected that this sum will make it possible to care for 50,000 children. Schools will be sponsored by local educational authorities who will determine how much the mothers will contribute toward the costs of food and salaries of nursery employees not paid by WPA. About 25 cents a day, it has been estimated, will be the usual charge, although in some cases child care may be free.

The first of the war plants to start planning a nursery of its own, apparently, is Douglas Aircraft, at Santa Monica, Calif., which has been hiring twice as many women as men lately. The nursery is expected to be opened this month.

Douglas, however, is not the first industrial firm to establish a nursery. Five years ago John H. Swisher & Son, Inc., cigar manufacturers of Jacksonville, Fla., discovered that many women employees were boarding their children in under-privileged homes. An air-conditioned nursery, designed to accommodate from 100 to 150 children, was opened on the top floor of the plant as a result.

In Great Britain, nursery schools are already well established. Fifteen thousand had been opened by March of this year, the *Survey Graphic* reports in a recent issue, and arrangements were being made for 700 more. The British are also experimenting with a cooperative system whereby one woman looks after children from several households, releasing other mothers for war work.

★

New Retirement Plan

An unusually comprehensive employee pension plan, providing not only for retirement income for life beginning at the age of 60 but also for special benefits in the event of disability, death, or termination of service, went into effect July 1 in the W. T. Grant Company's 500 stores and offices throughout the country. Approximately 3,100 employees of the company, 70 per cent of whom are women, are immediately eligible for membership, being at least 30 years of age and having completed at least two years' continuous service with the company.

Highlights of the plan follow:

1. Benefits are free to employees earning up to $1,500 per year. Employees earning more than this pay nothing for benefits based on their first $1,500 of income and contribute a percentage of income over that amount. It is estimated that the company's contributions will cover about 75 per cent of the total costs.

2. As the plan provides for retirement five years before federal old-age benefits become due, the employee may elect to receive a larger retirement income during the first five years of his retirement and a smaller one after Social Security payments begin.

3. A disability clause grants to any member of 10 years' credited service who becomes permanently and totally

disabled a retirement income for life, calculated in the same way as a normal retirement income. If the member has less than 20 years of credited service when disabled, the calculation is made as though he had completed the 20 years, although no disabled member will receive more credit than he would earn if he were to continue in service to the age of 60.

4. Credit will be given for service completed by members before July 1, 1942, the full costs to be borne by the company. Employees now on military leave of absence may receive credit for prior service upon their return to the company.

5. Thousand-dollar termination and death benefits, in addition to return of the member's contributions with interest credits, are payable upon termination of service or death after 15 years' credited service.

6. The plan is administered by a special retirement board of not less than six people, two of whom are contributing members of the plan (but not officers of the company), elected by the contributing membership. Assets are held in trust for the members by the Guaranty Trust Company of New York.

★

Solving the Problem of Continuous Operation

A plan designed to give employees every tenth day off for much-needed rest, but still providing for continuous seven-day-a-week factory operations, was launched last month at the TAPCO plant of Thompson Products, Inc., with indications that the main plan would soon follow suit. The new schedule was adopted because it had become apparent that no worker could put his best efforts into a job seven days or nights a week, month in and month out.

In order to maintain production, it will be necessary to hire new workers in the ratio of one to 10 to take the place of employees given a day off. All groups will continue to operate with a full staff each day, and the additional personnel will function as a "floating crew," constituting a reservoir of trained employees who will be available when a new plant now under construction is completed. At that time, additional replacements for the trained personnel transferred to the new plant will be hired to perpetuate the program.

To enable employees to plan ahead to make best use of their day of leisure, each chief supervisor is provided with a booklet in which days off are scheduled for at least three months in advance. Under the plan each employee will have a different day of the week off each time.—*Friendly Forum* 7/24/42.

★

Non-Members Pay for Union Benefits

A contract between P. Lorillard Company and a C.I.O. union entered into recently after four years of Labor Board litigation includes this novel compromise on the question of union security: Union dues, not to exceed a stipulated sum, are to be checked off from the wages of all employees, non-union as well as union members. The stated aims of this checkoff divorced from requirement of union membership are to recognize the services of the union in behalf of all employees and to make the agreement secure. The company retains 5 per cent of all the money collected to compensate it for its work.—*Labor Relations Reporter* 4/6/42.

THE TECHNIQUE OF INTRODUCING NEGROES INTO THE PLANT

By HERMAN FELDMAN
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If industry hesitates to use Negro labor in any but menial jobs, it is not, in most cases, because employers themselves are prejudiced but because they are deferring to the prejudices of their white employees. Any attempt to mix white and Negro workers, they fear, will bring a long train of industrial relations difficulties in its wake. The obstacles to use of colored workers, however, are not insuperable. The July issue of PERSONNEL presented a broad picture of the problems involved in introducing Negro labor into the plant, and outlined the general policies to be adopted when both whites and Negroes are employed. Mr. Feldman here suggests a realistic step-by-step program whereby Negroes may be placed in production jobs with a minimum of friction. As author of the book, "Racial Factors in American Industry" (Harper & Brothers, 1930), and as a consultant in labor relations, he is particularly well qualified to offer sound advice on the subject.

THE shortage of manpower for war production has brought into focus more clearly than ever before the failure of many plants to use adequately or at all the available supply of Negro labor. There are, of course, many reasons for this. The employer may be acting purely from personal prejudice—in that case his attitude is irrational, and this article will not concern itself with him. On the other hand, it may be that he entertains outmoded notions about the unfitness or inefficiency of Negro labor, or hesitates to employ Negroes because of the prejudices of his white workers. In either instance, the war manpower situation should prompt him to reexamine obstacles to the impartial selection of employees. In all probability, he will find they are far from insurmountable.

NEGROES CAN DO THE JOB

In the July issue of PERSONNEL,* Franklin O. Nichols drew attention to the increasing number of plants which have started hiring Negroes or have expanded their Negro personnel. He also cited reports which indicate that the productivity of the Negro worker is as high as that of the white worker, in some cases even higher. This should help to dispose of current misinformation about the relative performance of white and Negro workers. The absurdity of the popular attitude, in fact, is illustrated in

* "Employment of the Colored Worker," p. 409.

the irreconcilable expressions, "He works like a nigger" and "He's as lazy as a nigger."

If Negroes lack skill or competence, it is largely because they have been barred from the training readily available to whites. Fortunately for the employer who is planning to hire them now, however, the last few years have seen the development of simplified methods of training workers for skilled industrial tasks. Moreover, the education of Negroes has been making rapid strides, while employment opportunities for them have been limited, which means that there are many well-educated Negroes available for training. Some years ago a metal trades concern in Cleveland collected data on the educational backgrounds of its white and colored employees. The average white worker, it was found, had stopped school after the fifth grade, while the average Negro had finished the third year of high school. In the employer's view this situation was due largely to the fact that the South had improved educational facilities for Negroes and lagged in making jobs available to them.

THE REAL PROBLEM

But it is another aspect of the problem which is of most immediate interest: Many employers desire to hire Negroes but fear friction in the plant or in the community, and are thus deterred by the initial difficulties. However, if the employer plans his procedure well, many of the obstacles which loom large in the picture today may recede to comparative unimportance. The purpose of this article is to consider exactly what the procedure should be. While the principles discussed may apply in lesser degree in one industry or locality than in another, they will serve to indicate to employers the range of measures open to them. The article will, therefore, deal in sequence with the introduction of Negroes and the handling of a Negro labor force:

1. ***Clear Management Policy the Primary Factor.*** The personal interest of the operating head of the concern is an important factor in plant policy. Where management itself is convinced of the need to use its influence to the full in this matter, a long leap forward has been taken. But if top management is apathetic, the personnel or labor relations executive must accept responsibility. According to the best current conception, exercising an educational influence in labor relations matters is a primary part of the personnel job. Incidentally, it would help if managements which are free from prejudice against the Negroes would set forth their position in published statements or personnel booklets. An outspoken stand in behalf of fair racial attitudes has an excellent educational influence.

2. *Preliminary Survey of the Plant's Problem.* Once management has made up its mind to introduce Negroes into the plant, it should analyze the obstacles that are likely to arise and consider ways of overcoming them. Such a survey will enable a plant to take steps which will go far to solve later problems. As an illustration, a plant which is expanding must build additional locker and washroom facilities; if it contemplates adding Negro labor at some future date, it can plan facilities accordingly. Preliminary conferences on the matter of Negro labor should be confined to a few officials and, where feasible, a few trusted employees. The matter should be kept confidential in order that alarm may not spread or hostile attitudes congeal before steps to overcome prejudice have been undertaken.

3. *Winning Over the Supervisory and Minor Executive Staff.* Once the decision to add Negro labor has been made, the next step, as in most changes of a general nature, is to make certain that supervisors and minor executives will support the program. General conferences should be held to insure that those in administrative posts will be in sympathy with the new policy, or at least willing to cooperate. Naturally the focal points in supervisory cooperation are the foremen, the "straw bosses," and other minor supervisors who will have to "sell" the Negroes to the general personnel. These officials must be schooled to set a pattern of fair relationships, to avoid all actions or attitudes which might appear to disparage the newcomers.

4. *Wise Determination of the Initial Spot for the Negroes.* If Negroes are new to the plant and their introduction is still problematical, it is folly to place them under a foreman who is secretly hostile to them or in a department where white workers may think they constitute a threat to standards. They must have a well-disposed and fair-minded foreman, one who possesses the confidence of his workers and, if possible, they should be placed in a department where the workers are friendly, or at least not too hostile to them. And, in the beginning at least, they should be assigned to work of a non-competitive type. The best spot at which to introduce them would probably be a department with rapid labor turnover, or one where contacts between the workers are somewhat casual.

5. *Advance Educational Activity Among Workers.* When introducing members of a despised ethnic minority into the plant, something in the nature of educational work—advance propaganda, if one will—may be useful. One approach—a direct one—is to spread information which will tend to correct the erroneous notions people hold about other racial groups. Where the direct method is applicable, management may even go so far as to make an inspirational appeal to the employees to join the executives in the pioneer work of opening hitherto closed doors to an underprivileged

group. Under present conditions, an appeal to the workers' sense of fairness should be particularly effective because we are fighting for the ideals of democracy, because Negroes are carrying their full share of the burdens of war, and because the fullest use of available manpower is necessary if we are to win.

It should be borne in mind, moreover, that employers often bring trouble on themselves by not explaining their policies to the working force. An example is the recent case in which an employer allowed a group of delivery workers to think that a drastic cut in deliveries was due to the desire for higher profits, neglecting to emphasize that management had adopted the new system at the insistence of the War Production Board. The arm of the employer is now strengthened by President Roosevelt's official condemnation of discriminatory employment practices, and similar statements by national agencies.

Some support can often be found also among the more enlightened employees. On many industrial issues, older and more respected workers are often sincerely willing to take the initiative in what may be at first an unpopular cause. If the workers are stimulated to think calmly on the matter, adherents of the liberal point of view will probably come forward.

6. ***Careful Selection of the First Representatives.*** If the first Negroes hired are chosen wisely, friction will be minimized. They should be selected not only because of their ability, but because of their personality. It is so important that they make a good impression on their fellow workers that individuals who would not help to reduce antagonism should be barred at first.

7. ***Gradual Rather Than Precipitate Increase of Negro Employees.*** Opposition to large plans is often reduced by unpretentious beginnings. It is desirable to let the initial shock, if any, subside before attempting to introduce large numbers of Negroes. Once the idea that it is normal for white and colored to work together has sunk in and the early debates and excitement, if any, are over, there is likely to be less difficulty. Hence the Negroes should be introduced into the part of the plant where they are least likely to cause resentment, and a little time allowed to elapse before they are hired for departments in which questions of prestige might arise.

8. ***Tactful Handling of the Social Relations Issue.*** One of the questions to be considered is how close a personal relationship between white and colored workers should be required. It may be found wiser not to place Negroes where very much personal association with the whites will be necessary until other available openings have been filled successfully.

As to whether there should be segregation of whites and Negroes, there is considerable diversity of opinion, and a pronouncement on the subject

is easily misunderstood. Ideally, of course, people in a plant should deal with one another as human beings, without reference to race, creed or color. But tradition and prejudice are deeply rooted in some localities, and if management does not take this into account, at least in the beginning, all its chances of opening new avenues of employment to the Negroes and new sources of labor for the plant may be jeopardized.

The policy of segregating workers into separate groups cannot, therefore, be evaluated without reference to the motives of the employer and the effects produced. If segregation is adopted as a means of lessening friction and as a temporary expedient, it may be of immense benefit in the solution of the racial problem. The fact that white and colored workers use the same sanitary and recreational facilities in many plants indicates that there is no insuperable obstacle to the establishment of enlightened inter-racial attitudes in some industries and localities.

To the Negroes, segregation is not only an economic matter; they are sensitive to implications of lower social status, believing that segregation is a bar to the rounded experience which will make the colored man a more alert and intelligent worker and that it will delay his acquisition of the best American standards. But if an employer finds it too difficult to overcome prejudice on the part of his workers, he must not act in accordance with the mistaken belief that Negroes object to segregation only as a matter of pride or because they are desirous of social equality. On the contrary, most Negroes are also concerned with practical aspects of the matter; they know that when they are segregated their accommodations are often inferior to those provided for the whites. To supply Negroes with lockers, washroom facilities, lunchrooms, and housing as good as those assigned to the whites serves to show that management genuinely respects the Negroes, and thus helps to raise their status in the community.

By proceeding slowly and using experience as a guide, the employer has an opportunity, through a long-time program, to rid both his employees and the community of erroneous notions about the Negroes. Various opportunities can be found to build up the prestige of the racial group and to help them to establish normal relationships in industry and in the community.

9. ***Planned Introduction of Negroes into Staff and Supervisory Positions.*** When the preliminary problems have been solved, the company is ready to give the better workers among the Negroes their due in promotions and responsibilities. Here several difficulties present themselves, but they can be reduced by attention to the human elements involved. As a start, a Negro might be appointed to a staff position which did not involve supervision. Use of a Negro chemist, for example, would accustom people

to the idea that a colored man might have the ability to hold a higher-grade job. Thus a precedent would be set for other appointments.

When a Negro is given the job of foreman or some similar supervisory position, it may be desirable to put him in charge of a Negro or mixed group. If he is put in charge of a group of white workers, there must be a very clear basis for his advancement; otherwise white workers who think they are entitled to the promotion will become resentful. Through preliminary conferences, workers can be led to accept the appointment, tacitly at least. If these points are borne in mind, it will be possible to establish the principle that Negroes are just as much entitled as whites to use their talents to best advantage.

NEGROES IN UNIONIZED INDUSTRIES

Occasionally the employer himself is perfectly willing to introduce Negroes and would feel fairly confident of obtaining the acquiescence of his workers if he could deal with them individually, but is bound by a union contract which requires that all workers be members of the union. It is necessary, then, for the union to accept Negroes on their merits. When they are barred completely from membership, as in certain large unions, or when their admission is greatly restricted, the employer faces a major difficulty.

Where cooperative relationships between the management and the union exist, the employer may be able, because of the present war emergency, to influence the union to change its policy. Here he will need not only firmness but patience and tact. He may even have to call on leaders in his own industry, including those of the employers' association, and in the community, for a united effort to overcome inertia.

Finally, it is well to remember that every situation presents a different set of circumstances. Admittedly, in some cases the difficulties may be unusually great. But the employer should not assume that he is facing an insuperable problem until he has thoroughly appraised the issue. The problem of racial adjustment requires the application of managerial methods already in use rather than any startlingly new approach. Where the spirit of management is awakened, the detailed methods will bring results.

WHAT'S WRONG WITH SAFETY TRAINING?

By ALFRED M. COOPER

Too often, according to Mr. Cooper, the safety engineer is management's underpaid stepchild, which may go far to explain why accident rates in war industries have reached an all-time high. Many safety programs, he also points out, actually seem to be based on the premise that employees enjoy hurting themselves and their fellow workers and that they can be frightened or shamed into safe habits. In this article he presents a prescription for turning the safety executive from a mere gadgeteer into a specialist in human engineering, and outlines a new method of safety education which really works.

IN the "help wanted" columns of a daily paper the following jobs were advertised recently: *production engineer,* $450; *mechanical engineer,* $400; *safety engineer,* $175. The discrepancy between the salary offered the safety engineer and those listed for the production executives is typical of many war industries. I am wondering if there is not a direct correlation between this fact and the further and obvious fact that the accident rate in our war industries has reached a new all-time high.

As a rule, we get what we pay for, in merchandise or in manpower. In today's labor market a company cannot get a really good safety engineer for $175 a month, nor for any figure within double that amount.

SAFETY THROUGH GADGETS?

Here is what too often happens when management decides to put a safety engineer on its staff: A hurried search is made through the organization for an engineer who is not too valuable in the job he is holding. This fellow is given the title of safety engineer and told to get busy and reduce the accident rate.

Thus rudely pitchforked into safety work, the engineer, with all an engineer's faith in mechanical devices, sets about learning all he can about machine and tool safeguards. From books and catalogs and from safety appliance salesmen, he picks up the jargon of accident prevention and learns something about the uses of goggles, safety helmets and similar protective equipment. He runs himself ragged trying to cover every machine and worker in the plant with some sort of mechanical safeguard, and pleads with the better-paid production executive to cooperate with him. Then, as the accident rate steadily increases, the harassed man brings in some outside agency to conduct courses in first aid, in order that injuries may result in nothing more serious than lost time.

This picture is a common one, and it is all wrong. Safety engineering is, or should be, an extremely important, well-paid profession. It is not

primarily a job for a mechanical engineer. It is a job for an expert in human engineering. Accident prevention never was and never will be attained by gadgets, no matter how cleverly they may be contrived. It can become an actuality only when all employees in hazardous occupations are carefully and expertly trained in methods of avoiding injury to themselves and others. It is in this human-factor department that the mechanically trained safety engineer falls down badly. How hard he has fallen down in the past two years may be measured by the appalling increase in accidents in all our war industries.

It is criminally stupid to blame the increase of accidents in war factories on the influx of new workers and on speeded-up production schedules that have, of necessity, been inaugurated. This is merely an excuse, and a poor one, for a condition that can be corrected. New employees properly trained in accident prevention from their first day on the job are safe workers. And speed in itself is not the cause of accidents. It is haste, not speed, that causes injuries to workers, and workers can readily be trained to avoid undue haste in performing the operations that make up their jobs, even when they must continue to work swiftly.

TRAINING THE SAFETY ENGINEER

Safety engineers should be well paid. But in order to justify an increased salary they should be well and thoroughly trained for their jobs. Carefully planned courses in safety engineering should be offered in many of our better technical schools. And in these courses the greater emphasis should be placed on the development of the student, not as a mechanical engineer, nor as a gadgeteer, but as an expert in human-factor engineering. Above all, he must know how to install an effective safety training program for all employees in hazardous occupations, a program which is conducted, not by lecture method, but by conference method.

The graduate of such a course should serve an apprenticeship of several years under the tutelage of an expert safety engineer. For one thing, he will need a few added years to give him the maturity without which he will never impress the employees and supervisors with whom he must work in close harmony. When he finally takes charge of the safety work in his plant he must be qualified to do a big job effectively. Such a man will, of course, be paid a salary commensurate with his ability and training.

At present, safety engineering is in the developmental stage. Much emphasis has been placed on the use of mechanical safeguards, and excellent progress has been made in that direction. It is when the safety engineer, sometimes working in conjunction with the educational director,

attempts to install an effective program of safety training that the human factor so often presents an insurmountable obstacle to the success of the entire accident-prevention effort.

SOME INEFFECTIVE TYPES OF TRAINING

There are three common types of safety training in effect in our war industries, and none of these has proved effective in securing a sharp diminution in frequency and severity rates. The three methods may be referred to as *exhortation, excoriation,* and *ridicule.* Combined with these training methods, there is often a general effort to frighten the worker into safe working practices, principally by the display of gruesome pictures of emergency hospital cases.

More often than not the safety training is carried out by lecture method. Or a series of safety "conferences" is scheduled in which the meetings are in no sense real conferences at all but camouflaged lectures. In these meetings the employees are given safety "pep talks," or individuals in the group are "put on the spot" regarding accidents that they have had in the past or are asked for suggestions concerning methods by which accidents may be prevented in their departments in the future. Sometimes two or more of these methods are used at one meeting.

It is only necessary to attend one of these safety meetings and study closely the reactions of the employees gathered there to appreciate the reason for the steady increase in the frequency and severity rates of injuries to defense workers. If the meeting is a lecture and the workers are exhorted to greater efforts in preventing accidents, you will see a passive, mildly interested audience which listens politely to the speaker and leaves the lecture room just about as safety-minded as when it entered. If the employees are physically tired and the lecturer's voice is not too loud, some of those in the back row will enjoy a little snooze before going back to work.

In another type of safety meeting, conducted by the safety engineer or a department head (or by both at once), an effort is made to get the audience to participate to a limited extent—usually by asking various employees to justify some unsafe action of theirs which led to an accident. Here you will find half the group angrily on the defensive, and the remainder of the audience bored to death.

Ridicule is employed as a means of reducing accidents in meetings, in personal contacts with the workers, and through the medium of posters. The assumption here is that workers can be shamed into safe working habits and thus made to cease killing and maiming themselves and others.

I have never been able to determine exactly what psychological theory

—if any—is behind the preparation and execution of these safety training programs. It would almost seem that those responsible for them have a conviction that all employees enjoy hurting themselves and others, and will continue to do so until someone tells them to stop it and shames them into adopting safe working habits.

THEY DON'T HAVE ACCIDENTS ON PURPOSE

Once in a while, however, you find a safety engineer who institutes a program of safety training based on an entirely different conception of the employees' attitude toward this whole matter of accident prevention. This engineer begins with the assumption that no employee wants to get hurt or to hurt his fellow worker. He follows this with the premise that employees injure or kill themselves only because they do not know any better. He feels that each of them would welcome proper instruction in safety. Finally he concedes that the supervisor and employees in any given department, *as a group,* know more about the cause and prevention of accidents in that department than anyone else in or out of the plant.

If he starts with this premise, it is obvious that the safety engineer is not going to lecture to the men. Neither will he excoriate them for their failure to work safely. And most certainly he will not hold them up to ridicule when they have, through pure ignorance, committed some unsafe act.

Instead of doing these things, this safety engineer will cast about for a method of epitomizing the total safety knowledge and experience of each group of workers and thereby making this information available to each member of the group.

WHAT IS REALLY NEEDED

Experience in foremanship training, in public relations training, and in safety training, has proved that any group of reasonably seasoned employees, in the aggregate, actually does possess an enormous fund of unorganized knowledge on all matters pertaining to the daily work. In this case the job of the safety engineer is to devise a sure-fire method of collecting this knowledge and distributing it to each employee in the department. Experience has proved also that the bona fide conference, conducted as a free and open discussion meeting, is the only device that will do the job satisfactorily.

Likewise, it has been found that the group's own foreman or supervisor is the very best man to lead the discussions. This is true for a number of reasons, among which are these: The employees are accustomed to receiving on-the-job training from their foreman. And the foreman is in

a unique position to see to it that all ideas for accident prevention developed by his subordinates are at once put into effect on the job by each member of his working force.

The foreman must, of course, be given some training in the technique of conference leadership, but this can be taken care of by the plant's educational director who is—or should be—an expert on the subject. In practice, the foreman learns most about conference leadership by actually leading safety conferences.

In safety meetings conducted for groups of 20 or 30 employees and held but once monthly for each group, an analysis is made of the underlying causes of all accidents. In the opening meeting each group develops its own list of underlying causes, arranging them in order of their importance in the particular department. These lists are then boiled down by the safety engineer or educational director to a master list on which the relative importance of each underlying cause is given a weight, which depends upon the number of times it appeared in first, second, or third place on the group lists, or in some lower classification. Following is such a master list, which was developed by a department employing several hundred men:

Underlying Cause	*Weight*
1. Negligence	339
2. Haste	265
3. Over-confidence	217
4. Lack of knowledge	214
5. Worry	208
6. Thinking of things foreign to the job	192
7. Improper supervision	168
8. Physical defects of men	160
9. Fear	150
10. Defective equipment	144
11. Lack of cooperation	142
12. Wrong mental attitude toward safety	140
13. Horseplay	106
14. Misunderstanding of orders	91
15. Disobedience to orders	61
16. Lack of emotional control	56
17. Poor judgment	51
18. Bullheadedness	42
19. Lack of interest	36
20. Recklessness	25
21. Outside interference	15

Since this list embraces all the underlying causes of accidents in the department in question and the causes are arranged in order of their importance, it should be obvious that this list constitutes a comprehensive course outline for a safety training program in the department. Thus, in each succeeding safety conference, discussion will be limited to consideration of one of these underlying causes, beginning with the important ones at the top of the list. The employees will discuss concrete cases brought

out by whoever is administering the training program, all of which bear directly on the underlying cause under consideration.*

Administration of an effective conference training program in safety is unquestionably beyond the powers of many safety engineers and educational directors in our war industries. Yet it is instruction of this type, which has proved itself invaluable in foremanship training, that every safety engineer in industry should be qualified to institute in his plant. There are now available, in various universities and governmental agencies, men who are qualified to teach safety engineers the technique of conference training. Such instruction would be given gratis.

Industry now needs safety experts who are carefully trained in both the mechanical and the human-factor departments of their job. Until more men of this type are secured, accident rates will remain excessively high. And when safety engineers can keep accident rates low, despite the influx of millions of untrained workers and regardless of how the working schedules may be speeded up, surely management will begin paying them salaries commensurate with their worth to the organization employing them.

* The foregoing is an outline of the rehearsed-conference method of safety training, which is presented in greater detail in the author's book, "Employee Training," McGraw-Hill Book Company, Inc., New York, 1942.

Selecting the Safety Engineer

WITH the manpower situation what it is, it may be impossible to hire a good safety engineer. This means that management must create one by selecting and developing a man with the proper qualifications.

First of all, however, management must recognize that accident prevention is a managerial function, but not a matter of *line* authority. The safety engineer should be placed in a position of *staff authority* with the title of assistant to the general manager. Thus he must be a great deal more than an inspector or a specialized clerk.

It is essential, of course, that the safety engineer should have a mechanical instinct, and some technical education gained formally or through actual experience. He should know something of the technical problems peculiar to the plant; ideally, he should have held some job which enabled him to obtain an over-all view of production operations.

Because management should be concerned with developing a safety engineer rather than a safety inspector, it should never choose a man whose longest suit is accounting. It is true that accurate statistical information is important in accident prevention, but such information is a means to an end and not an end in itself. Beware of the "engineer" who is happiest when he is figuring out days lost accurately to the last decimal point.

But technical qualifications are not the only ones needed. Few branches of human endeavor call for more sincerity of purpose and solidity of character than

safety engineering. "Selling" safety is an important part of the job, and sincerity of purpose and force of character will go a long way toward accomplishing this. So will enthusiasm. And above all else the safety engineer must have personality, approachableness, poise in dealing with people—call it what you will. Finally, he must possess an inquiring mind.

If such a man is chosen, he will generally train himself. But he would do well also to attend one of the many government-sponsored courses in various aspects of safety engineering if such are available in the community. He can follow the example of the line organization and visit other plants to see what they are doing and how well they are doing it. The insurance company's engineer will be only too happy to advise and assist him. At his disposal, also, is a vast library of accident-prevention material, ranging from the catalogs of equipment manufacturers to American Standard Safety Codes.

—GEORGE M. MCAINSH in *American Mutual Magazine* 8/42

Six Days On—Two Off

WAR production pressure was first felt at Pratt & Whitney, West Hartford, Conn., two years ago, and after December 7 the company's heavy schedule was increased to include Sunday. Day men put in 64 hours per average week, including eight hours each alternate Sunday; night men worked even longer. Three months on this schedule and the men became dangerously overtired.

The answer was an eight-day week—six days of work, then two of rest—with a swing shift to handle the machines for men taking their days off. Under this plan, each man is at the plant 72 hours during a six-day period, and then has two days' complete rest. He gets an hour for lunch each day; so his working time is 11 hours a day, or 66 hours for the six days.

Figuring the averages on a seven-day-week basis, the man works 57¾ hours per average week. While this is a longer workweek than it is generally believed men can stand for extended periods, the workers are not tired—the two-day rest periods make the difference. The nerve strain, recently all too apparent, is gone; the general efficiency of the personnel is rising.

Payment is made on the basis of eight-hour days and 40-hour weeks; accordingly, overtime at time and one-half for ordinary days and double time for Sundays or holidays becomes due after a man has worked normal hours. The effect of this is that each man is paid for 75¾ straight-time hours per week, which gives him an average overtime bonus of 31.2 per cent per week.

Naturally, such a departure from the ordinary way of handling time had to be explained to the men. Eight-day-week calendars were issued, although they were not called calendars but simply "1942 working schedules." Each man can tell in advance which days he has off during the entire year and plan accordingly. There are no vacations . . . no holidays. If the plant ever closes for a major holiday, the matter will be handled as a separate problem at that time.

Counting the two lunch periods in each 24 hours reserved for maintenance, the plant is really on a 154-hour-a-week basis. And it is operating on that schedule without draining the skilled manpower market of the men who would be needed if a third shift were installed.

—*Mill and Factory* 4/42

THE WORKERS JUDGE MANAGEMENT

By HARRISON F. DUNNING
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Though wages, hours and working conditions are prime factors in employee morale, workers value good management too. They like a firm that knows what it is doing and why, and they have an uncanny knack of spotting the points where managerial deficiencies exist. In fact, says Mr. Dunning, a good many executives' ears would burn if they could hear the justified criticisms the rank and file levels at them. In this paper he analyzes the workers' complaints and suggests a specific management tool for correcting conditions which make employees lose faith in their superiors.

"THAT place! Don't waste your time there! They've got no management!"

The first time I heard a worker complain about lack of management I thought he meant that the company was a poor one to work for—wages on the low side, a sketchy industrial relations program, very few opportunities for promotion—and that he had a nebulous idea the situation was the result of poor management. But hundreds of interviews with job applicants who have described their troubles at former places of employment have convinced me that workmen do possess a well-crystallized idea of what constitutes good management and, further, that they can truthfully lay that stern charge, "They've got no management," against many an industrial concern with good wages, vacations with pay, promotional opportunities, etc.

The workers' charges stem principally from management failure—at least in their eyes—in four prime management functions, four failures which, with human nature what it is, must be constantly guarded against. I list them below as I have heard them from the men who do the work:

1. ***Failure to Consult and Advise the Front-Line Supervisor.*** As corporations grow large, and many are expanding with unbelievable speed these days, there is a tendency to follow the rule of yesterday. Senior executives consult department heads before making a management decision. When the decision is made, it is announced to department heads. But in a rapidly growing company many department heads no longer actively direct the people under them. It is the shift managers, supervisors, section managers and leaders who are in daily contact with the rank and file. The department head who once knew every man by his first name now knows precious few by their last names; yet he, and he alone, is consulted before a management decision is made.

Does he ask any of his front-line supervisors for opinions? No. Does he still stop to chat with Joe and Jim and John, workers in his department? Very rarely. He talks with a few "old friends" on occasion, but fails to realize that they are the old guard and no longer represent the typical industrial employee.

Workers say that the man who should be consulted about what they think, how they feel, what they like and do not like is their immediate supervisor, the "boss" on the firing line, and not some department head who pokes his nose in a couple of times a day on his way to a committee meeting and nods stiffly. Employees think modern management should insist that department heads consult the front-line bosses before decisions are made or that the chief operating executive himself should consult them if the department heads cannot or will not. In labor's opinion this would prevent costly errors which hurt both management and labor. "They've got no management," said a mechanic, "They're too far away for us working folks. They never ask questions."

2. ***Failure to Make Reasons for Decisions Clearly Understood.*** Management makes a major policy decision and outlines the reasons for it to department heads. Department heads tell the front-line supervisors what the new policy is—no pros and cons, just what it is—and then go home and explain the inner details to their wives. Workers ask their front-line boss "Why?" The supervisor is licked; he really doesn't know "why." He can't back management because he has no sales tools; he can't condemn management because he might lose his job. All he can do is pass the buck: "Don't ask me, I don't know. Something the front office decided, I guess."

At that point workers lose faith—faith in the supervisor because the fact that he doesn't know the answers proves he carries no weight; faith in the department head because he failed the supervisor; faith in executive management because such a condition exists. America is a democracy. It never minds being told that it must do something, but it wants to know why, the pros and cons. Labor is democratic and wants to be reasonable, but it hates arbitrary commands. Certainly one of the reasons for the tremendous growth of unions, mainly in very large corporations, was the desire on the part of labor to know what management was thinking and why, and to provide a channel through which labor's own views could reach management. All too often we think of unions simply as bargaining tools, a means of attaining higher wages. That may be true of some of the wilder ones, but the management-labor committees encouraged by the War Production Board have given the final lie to the idea that it is true in general; more than 1,000 are now in existence and in the main are

proving smoothly helpful. "They've got no management" said an old-timer. "They don't know what we think, and we don't know what they think."

To summarize the first two points briefly, workers recognize the extreme value of two-way information channels—from labor to top management, from top management to labor—and count weak any management which fails to see that such two-way information channels are established and kept in *accurate working order.*

3. ***Failure to Make Quick Decisions on Important Matters.*** After the studies are made and the facts are in, some decision should be made. The red tape, the sleeping on the matter, the endless consultations make workers wonder: Have we strong, certain leadership, or don't our executives know where they are going and why? And workers seem to know, somehow or other, whether the fault lies with a supervisor or department head who failed to carry the matter "up," or with a top operating executive who cannot decide everything himself because he has no time and will not let anyone else take any responsibility. "They've got no management," said one man, "because they can't decide what they want to do. It's just a rumor factory, with management saying nothing."

4. ***Failure to Delegate Authority and Responsibility and See That It Is Accepted and Exercised.*** Employees have little or no use for managements full of bottlenecks. This is an age-old cry, surely; but workers feel such a situation more acutely than most managements realize. Concentration of the authority and responsibility for even the thousands of minor decisions necessary to industrial activity in the hands of a few top men makes workers angry and causes them to lose faith in their company.

Job applicants have freely confessed their lack of respect for power-grabbing top executives, some with bitterness, some with a biting humor that would redden the ears of even the most impervious managing executive—and make him go home and ask his wife if he really were that dictatorial, that jealous of his hard-earned position, that uncompromising, and that indifferent to other men's knowledge, opinions and ability. It is easy to think such things are always said about other men and other managements, but it is more profitable to examine the criticisms just once to see how close to home they come. Perfection is a rare quality, and labor is an uncanny judge.

Workers want their immediate supervisors to have authority and responsibility, to be able to make some of the daily minor decisions, to be able to contribute to the success of the whole venture. "They've got no management," a job applicant said, "just a bunch of straw bosses running around."

These four points are really four parts of one fundamental complaint. I have separated them because the workers separate them in conversation. The usual job applicant, under close questioning, will mention only one of management's four failures, generally the one which seemed to hamper him most as he struggled for a chance. But all four tie into one, and all four could be incorporated into a thumbnail set of directions for enlightened management, as follows:

1. Consult and advise.
2. Give reasons for decisions.
3. Make decisions from the facts and make them quickly.
4. Delegate authority and responsibility.

A program like that not only makes for a happier employee group; it makes for better supervisors and teaches department heads to assume the true management function, leaving the chief operating executive free to concentrate on truly major matters. Best of all, perhaps, it raises the whole production program to new heights of efficiency, quality and cooperation. It is people, and how they feel and act, that determine the success of any venture. The largest group of people in any business is labor, and labor feels it is entitled to intelligent leadership and management.

A USEFUL MANAGEMENT TOOL

One management tool has been used with success in eliminating the four failures. It sounds like a difficult and time-consuming activity, yet it pays tremendous dividends in understanding and cooperation and fosters intelligent decisions.

I refer to the practice of having a daily meeting of principal operating men, led by the executive in charge of operations. Such meetings require anywhere from 30 to 60 minutes; preferably they are held at 11 a.m. or later in order that operating men may devote at least two or three hours to their regular departmental work during the morning.

The agenda of the meeting should include:

Daily

1. Review of production and quality performance during previous 24 hours.
2. Plans to correct any faults revealed during that 24 hours.
3. Plans for operations during the next 24 hours.
4. Thorough review of any accident which has occurred—its cause and the means of preventing similar accidents in the future.

Periodic

1. Review of monthly safety record.
2. Review of monthly quality trends.

3. Review of monthly production results.
4. Review of monthly cost figures.

Intermittent

1. Discussion of any proposed policy change. All pros and cons should be aired frankly and freely, with the chief operating executive careful to keep peace in the family.
2. Statement of decisions reached on policy changes or new policies, with a clear explanation of the reasons for the decisions by the executive in charge. No buck-passing should be permitted as all the operating men will have helped the group reach the decision. In most cases, majority opinion should rule, and the minority be made to accept and support it.
3. Review of pending personnel and organization changes, with a full review of the reasons for them, in order that supervisors may be able to explain them to the employees.
4. Discussion of any subject bearing on the success of the company, such as:

    (a) Sales picture
    (b) Earnings picture
    (c) Tax situation
    (d) Effect of the war on company operations
    (e) Plans for the future

and other broad matters not directly related to the operating field which will help to give operations men vision, enthusiasm and faith—which they in turn will transmit to the workers.

Obviously in a very large company such a meeting should include enough front-line supervisors, or assistants to department heads, to insure that the reasons for decisions reach the men. If inclusion of such men makes the meeting too large and unwieldy, the management executive should insist that each department head hold a similar meeting daily with his front-line supervisors, and go over the same subjects with them, and that they, in turn, carry them to the workers.

ADVANTAGES OF THE PROGRAM

This program takes time and patience, but it saves more time and impatience in the long run. It will help both supervisors and employees to understand the business. Better cooperation between departments will develop, once they understand one another's problems more clearly. Further, new management policies seem to be accepted more readily when such a plan is followed, partly because the entire working force has a better understanding of the company's problems and position, and partly because

the supervisors, to whom the men look for explanations, are in full possession of the facts and can justify new policies.

Daily, compulsory morning management meetings (absence permitted only in extreme emergencies) will do in a period of months what years of hit-or-miss, talk-about-it-when-you-think-of-it or when-you-have-time methods will many times fail to do. These meetings give the chief operating executive a real opportunity to do a strong personnel and management job, and his assistants a chance to see management at work and to become a true part of management.

Understanding makes morale; morale makes success. Workers want *two-way* understanding because they want success in their chosen field of employment.

Compensating Executives in Government Service

THE well-paid industrial executive who goes to Washington to act as a civilian expert for one of the various defense agencies is generally called upon to make serious financial sacrifice unless his company supplements the government compensation. Few companies have as yet formulated a policy covering this point, however, the National Industrial Conference Board has found.

Of 196 concerns included in a recent survey, nearly two-thirds either had not encountered the problem or had not developed policies covering it; 44 were paying the executives compensation of some kind. Many of the firms differentiated between part-time and full-time government service. In the case of full-time service, 16 paid no compensation and 16 "considered each case individually." If the executive was on part-time government service, 10 made it a rule not to pay compensation, and 14 considered each case individually.

Of the 44 concerns which had adopted a definite policy of paying executives on government service, 26 were continuing regular salaries and 12 were paying the difference between company salary and government pay. Four were paying the executive's expenses in addition to his full company income.

—*Studies in Personnel Policy No. 44* (National Industrial Conference Board, Inc.)

Enforcing Maintenance of Membership

A NEW maintenance-of-membership arrangement is reported to have been included in a recent labor-management contract signed by one of the nation's leading manufacturing companies and its union employees. The arrangement provides for loss of seniority by employees failing to maintain their membership in the union, instead of the usual provision requiring the employer to fire such workers. The formula was worked out after the union insisted upon a "maintenance-of-membership provision," while the employer refused to sign an agreement that would compel him to fire workers who should subsequently decide to leave the union. It is reported that this plan may be adopted in other contracts where the major bone of contention is the maintenance-of-membership issue.

—*The Iron Age* 8/27/42

HOW WESTINGHOUSE REDUCES ABSENTEEISM

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Westinghouse Electric & Manufacturing Co.
Springfield, Mass.

Three hundred and fifty million man-days—enough to build more than 4,000 needed cargo ships—were lost to industry through ordinary illness last year. As the armed forces drain the ranks of the physically fit, this toll will increase. Mr. Armstrong shows in the following article what one company is doing to meet the situation. Westinghouse has not only developed a technique for arousing employee interest in good health; recognizing the importance of nutrition, it has even found a way to enlist the cooperation of the wives and mothers who prepare the workers' meals. This paper is based on a talk given by Mr. Armstrong at the Health in Industry Forum held at New Haven, Conn., May 7, 1942, under the auspices of the Manufacturers Association of Connecticut and the Connecticut State Medical Society.

IF we are to believe newspaper reports, approximately 350,000,000 man-days are lost to industry each year as the result of employee disabilities. Transposed into terms of battleships, tanks and bombers, that figure represents a staggering loss which requires immediate attention. The manpower situation is acute, and time is critically short. The bomber which is delayed may never be built; the keel which is not laid on schedule may never touch the water.

Moreover, unless particular effort is made to safeguard the health of industrial workers, there is every likelihood that disabilities will increase. The people who will replace employees inducted into service are not physically fit. They will need added health protection.

At Westinghouse, the health program grew naturally out of the safety program, which has been in existence for several years and has proved highly successful—the record this year is 3,000,000 man-hours without an accident—and the name of the Safety Department was changed two years ago to Health and Safety Department. In each department there is a health and safety committee composed of the department foreman, the union steward, and an employee. While the foreman and the shop steward act as committee members as long as they hold their posts, a different employee representative is chosen each month in order that all may have a chance to serve.

Incidentally, once an employee has served on one of the committees he feels some responsibility for the health and safety program. This is im-

portant, because all absences are not due to illness. Every personnel director knows that there are fewer absentees on double-time days.

Employees are often absent because they think, "What is money good for except to spend it? What's the use of having it, if there is no time to enjoy it?" Many of them, of course, have not had much money to spend until now—they were out of work or, if they are among the younger workers, they were living with their parents and had little money of their own. This situation will probably rectify itself eventually. Rationing may have an effect; if the employees can't buy the things they want even when they have the money, their point of view will change.

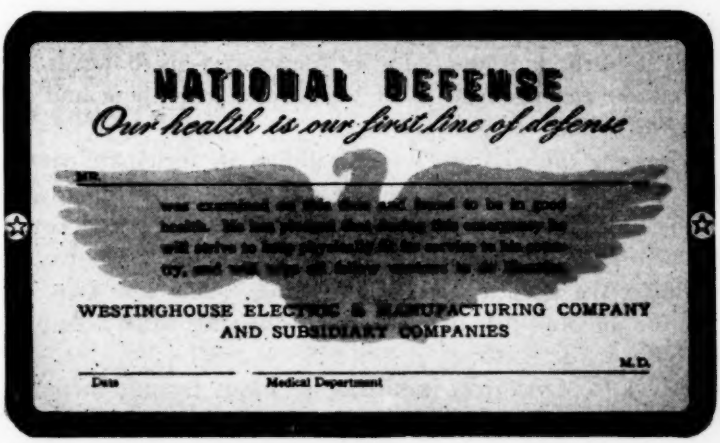
By far the most important cause of absenteeism, however, is ill health; the toll of ordinary sickness far overshadows that of accidents and occupational diseases. And there are four major steps a company can take to combat illness among its workers:

1. *Entrance Examinations*

Companies which give physical examinations before hiring have been accused of keeping people out of employment. But industry's fine safety record over the years is in part due to the practice.

The fact that we are now approaching the time when physical standards for employment may have to be lowered does not mean the preemployment examination has lost its value. On the contrary, if jobs are analyzed properly, the doctor can help determine just where the individual with a specific disability will fit into the organization.

An innovation recently made by our company is in keeping with the times. When a new employee passes our physical examination, he is given a certificate signed by our doctor (see below). This induces a sense of pride


NATIONAL DEFENSE

Our health is our first line of defense

MR.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
AND SUBSIDIARY COMPANIES

M.D.

Date Medical Department

in his good health, and provides him with tangible proof that he has passed the examination. When a survey was made two years ago, most of the employees stated that the examination they had taken at the time of employment was the first checkup they had had in many years.

2. *Periodic Examinations*

For many years, Westinghouse has encouraged periodic examinations among its employees. In a few occupations, such as foundry work, a periodic physical checkup, with X-rays, is required.

Generally, the employee is glad to take periodic physical examinations. His attitude, however, will depend on the doctor to a great extent; in addition, he will be unlikely to cooperate if he suspects that the company is trying to pry into his affairs.

3. *Periodic Supervisory Examinations*

While attention is being focused upon the worker's health, it is well to remember that the health of the supervisory and management personnel is equally important. Supervisors are working at a killing pace these days. As one fellow said: "You are either standing up straight or you are down flat on your back."

At Westinghouse, we provide periodic physical examinations for the employees in this group, examinations which are probably a little more thorough than those given the rank and file. We have selected a group of outside physicians who have the proper equipment. Our supervisors may choose the one they prefer, and they are sent to be examined on company time. Findings are a confidential matter between the examining physician and the supervisor, although the physician may furnish information to the supervisor's family doctor.

At the start we wanted to be sure that the supervisors understood that our only object was to keep them fit and on the job, and we have never tried to ascertain the findings. Most of the supervisors, however, have been eager to tell the management what was wrong with them and what they were doing to correct their disabilities.

It is certainly the company's responsibility to anticipate overwork and overstrain. We have made it a definite part of the superintendent's job to see that the people under him have periodic checkups and consultations with the doctor. The supervisor, in most cases, is one employee who *must* take time off. We keep a record of his time, make sure that he relaxes away from the job, and that he has enough assistants to be able to get away occasionally.

Recently E. S. Cowdrick, industrial relations consultant, made an at-

tempt to gauge the extent of this problem through the medium of a survey.* Types of disorders most frequently found among executives and supervisory personnel were mental and nervous breakdowns, digestive disturbances, with lowered morale, irritability and plain fatigue listed as subsidiary complaints. Some company doctors mentioned emotionalism and impaired judgment. Perhaps, adds Mr. Cowdrick, it is typical of the times that a few declared that nervous tension and mental strain were particularly prevalent among officials whose responsibilities included dealing with labor. Several others seemed to believe that the physical and mental deterioration was due less to responsibility and hard work than to harmful personal habits, i.e., excessive smoking and drinking, lack of exercise, and, worst of all, worry.

4. *Health for Victory Clubs*

A $10.72 basket of groceries gave our home economist the idea for a Health for Victory Club composed of homemakers. She watched a young employee and his wife purchase their week's supply of food in a local market. They bought plenty of food, but they did not buy *health*. The only fresh foods in their basket were 78 cents worth of meat, six lemons, six oranges, and one small head of lettuce. The rest of the money was spent for cans of "ready made" meals, white bread, several boxes of doughnuts and sweet cakes, a sack of sugar and five pounds of candy.

The wife was pale and thin. The baby she carried in her arms was awake, but it did not fuss or squirm as a healthy child might be expected to do; it lay limply, hardly moving. The fact that the husband was well dressed indicated that he was a well-paid factory worker, but he did not seem over-healthy either.

Is food a health problem? Well—the second most important cause of absenteeism in my plant in 1941, according to the employees' own statements, was the stomach. Certainly most people need to know more about what foods consist of, what foods are best for us, and what food will do for or against us.

However, we need not present this knowledge in terms of vitamins: It will do more good in terms which the ordinary employee can understand. People have been told of vitamin this and vitamin that until the drugstores can't keep a supply on hand. For that run-down feeling, they are urged, be sure to get this or that vitamin. Result—the employee buys a bottle of pills, takes them, and wonders whether he has had too much of the right or the wrong vitamin or whether he feels better or worse.

The Health for Victory Club is concerned with "good food buyman-

* See PERSONNEL, March, 1942, p. 304.

ship." It was formed to help the housewife with the job for which she alone is responsible—keeping her family healthy.

Every Westinghouse homemaker, that is, every woman who feeds a Westinghouse employee, is eligible for membership in the club. In addition, homemakers of employees in military service are invited to participate. Each club member is required to enroll personally in order that the economist may talk with her individually, and each member fills out a short questionnaire about her family, household equipment, electrical cooking equipment, gas, wood, fire, utensils, etc.

Each month members and local food merchants receive copies of a food guide containing menus which are both nutritious and appetizing. In preparing them, such factors as sugar rationing, growing seasons, yields of fruits and vegetables, and impending shortages are taken into consideration. Recipes are given for every unusual item, in addition to basic rules for frying eggs, boiling potatoes, making Irish stew, directions for using grease drippings in homemade soup, etc. The March food guide, for example, contained menus for 93 meals—breakfast, lunch and dinner each day—and more than 150 recipes. To obtain information for the guides, local merchants are interviewed each month. The menus are based on a minimum food budget of $14 a week for a family of five, although the budget is adjusted each month to conform to local food costs.

We feel that this booklet is an important part of the health program. Results of a recent Gallup survey show that one-half of the American adult population has not yet learned that there is a connection between diet and health.

For a number of years our company has used food to prevent fatigue. We have food wagons, so-called cafeterias on wheels, which tour the shop at mid-morning and mid-afternoon. Fatigue investigations have shown that between-meal snacks, such as milk, sandwiches, etc., do help to build up energy. People will eat them if they are made available. Otherwise they will find means of getting things which are not so good for them, such as soda pop, candy, etc. We sell literally tons of milk each day.

PUBLICIZING NUTRITION

Periodically, also, we place in the hands of the employee certain booklets and other information to be taken home to the housewife. Our recent booklet "Food Joins the Colors" was enthusiastically received. Posters and articles in the employee magazines are another effective way of promoting good nutrition. Our latest poster "Health Is a Part of National Defense"

is a simple, colorful one, easy to read and easy to understand, which describes pictorially the essentials of an adequate daily diet.

CHECKING UP ON THE CAFETERIA

An occasional questionnaire asking for criticism of our cafeteria has been worth while from many angles. It has shown us that some of our publicity has been effective and that some of our people are becoming more and more food-buying conscious. When asked what dishes interested them most, in our most recent survey, the largest percentage mentioned meat and vegetables. To the question, "Would you like to know about nutrition facts?", the majority answered "Yes."

Employees also pointed out a number of ways in which we might improve our cafeteria. One thing that we have discovered is that the employee doesn't want to wait too long for his food. He wants to be served quickly, and he wants his meals warm. Complaints about delays and cold food were most prevalent on the second shift. Several said they wanted more green vegetables, such as cabbage, lettuce, boiled onions, broccoli, etc.

Our local newspaper, *The Springfield Union,* has conducted a "Food for Fitness" campaign in the area, giving daily meals and costs and listing foods available, "best buys," etc. It has been surprising to see the number of these articles that are cut out and "stuck up" around the shop, probably as a reminder for the noon meal.

VITAMINS AND VISION

In one of our plants we have made use of vitamin A capsules to overcome eye fatigue among workers who assemble or inspect tiny mechanisms for war products. These workers take the vitamin daily. It builds up the visual purple, a substance in the retina of the eye vital to the process of seeing. Use of the vitamin was started in 1937 to help our color matchers assemble the parts of electric ranges and refrigerators correctly. The capsules immediately eliminated not only eye fatigue but also the lack of energy that had bothered some of the workers.

Recently, a group of girls in one of our departments complained about headaches and indigestion, while the records disclosed their rate of absence was high. The fact that all the girls were doing the same type of job led us to believe that something about the work was causing the ailment. The job was on one of our war products, and the girls were required to assemble a series of 20 silver contacts which must be exactly spaced .0003 apart.

Our first approach was to supply a large magnifying glass, but no improvement was noted. Then we tested the girls' eyes on a Keystone Visual Indicator, and found that all those who had complained had physical

defects of the eyes. After the physical defects were revealed, we referred the girls to an optometrist for a more thorough examination, and 25 per cent were fitted with glasses. We have had no further trouble; in fact, we have had increased production.

This story merely points to the need for eye examinations where work is hard on the eyes. If results of such tests are recorded on the employment specification card at the time of employment or transfer, turnover and absenteeism will be cut. In any case where an employee's eyesight has been impaired by accident or disease to the extent that he must wear corrective lenses while performing his normal work, he is furnished with spectacles equipped with prescription-ground safety glasses. This will be increasingly important when physical standards are relaxed, as they soon must be.

SALT TABLETS

For the past two years, we have furnished salt tablets to those who wanted them during the summer months. While some employees have said that these tablets made them sick, the increasing demand for more tablet dispensers indicates that most of the employees found the tablets beneficial.

Encouraging recreation off the job is another phase of the health program. If the company provides a few horseshoes or a bat and a ball, employees can get a good deal of exercise on the back lot. Often it is possible to arrange for them to make use of school gymnasiums. Westinghouse has inaugurated "health nights"—programs of setting-up exercises followed by a baseball or basketball game—and the employees hate to miss them. We also encourage volleyball, softball, bowling, tennis, horseshoes, ping pong, photograph clubs, and even horseback riding clubs.

To interest the young folks, make it stylish to be fit. Youngsters want bicycles not because they are worried about gas, but because the boy and girl friends are riding them. Girls will wear overalls and blouses if it is stylish. When *Vogue* and other magazines publish "What the War Worker Will Wear This Year," the girls will get into line. It will be stylish to wear overalls, and it will be safe.

Red Cross and hygiene courses have been conducted at our plant for several years. The classes have included men and women volunteers, superintendents, office and shop workers. That is another method of building up health-consciousness, which is, after all, a primary objective of our program.

Educational Program Curbs Absenteeism

DEVELOPMENT of employee "health morale" pays dividends in improved attendance, the Spruance Plant, Richmond, Va., has found. About three years ago, the company discovered that approximately 30 to 40 per cent of the working force were on inadequate diets, and in many instances neither the employee nor his family had any conception of personal hygiene.

"They all seemed to feel," Dr. W. L. Weaver, medical director of the plant, writes in *Industrial Hygiene*,* that illness was an 'act of God' over which they had no control."

The medical staff decided to attack ill-health by methods similar to those used to control accidents. A "central health activity committee," modeled after the central safety committee, was formed among the supervisors. This committee studied the plant statistics and found that 50 per cent of the absences occurred among 15 per cent of the employees.

This pointed the way for action. Each man in that group received advice on personal hygiene in a special health interview with the medical department. Whenever a worker was out sick, home conditions were investigated, and personal and home hygiene encouraged. There were also talks on nutrition, not only for those with bad attendance records but for the entire working force. "The response," Dr. Weaver declares, "exceeded our most optimistic expectations. In the cafeteria, consumption of dairy products, fruits, green leafy vegetables, salads and liver was doubled. Individuals carried home information which was valuable in improving the health of the family. Later these talks were supplemented by moving pictures on diet.

"The central health committee felt that it was necessary to carry on an active program of health propaganda. We began to issue health bulletins to each employee and supervisor. Health posters originating in the medical department and painted by a sign painter in the plant are put out each week."

As a result of this program, the minority group that had been responsible for 50 per cent of the absences has long since brought its attendance records up to par, and the health of the working force as a whole appears to have improved. "Absences due to illness began to drop after this program was started," Dr. Weaver points out, "and while the statistics show a rise in 1941, part of it was due to corrective surgical operations for defects picked up on annual examinations. We feel that these will pay us dividends in 1943."

* Bulletin of the Division of Industrial Hygiene, National Institute of Health, U. S. Public Health Service, Bethesda, Md.

Nutrition of War Workers

NUTRITION is one of the most important, but unfortunately most neglected, factors in employee health and morale. The improved health and morale which result when inadequate diets are brought up to adequate levels may be translated into greater working efficiency, fewer absences from work, and a decrease in the number of accidents.

Industry has paid far less attention to nutrition than it has to the prevention of accidents and occupational diseases. In one survey, only 26 per cent of employed workers' families were found to have what might be classified as good diets; the diets of 45 per cent were fair; and those of 26 per cent, poor. And of 33 plants surveyed for the Committee on Nutrition in Industry of the National Research Council last summer, only two employed a nutritionist or a dietitian. In one plant in New England the cafeteria menus were planned by

an "efficiency expert" whose sole qualification for the job was that he had been able to feed 4,000 men in 20 minutes!

There are a number of steps which can be taken by individual plants to insure the provision of good meals at reasonable prices. For example:

1. All cafeterias, kitchens, lunch stands, etc., should be under plant management and run on a non-profit, non-loss basis. In the committee's survey it was found that cafeterias, rolling kitchens, and lunch stands operated by concessionaires, whether the concessionaire were a private company or an employees' benefit association, were generally less satisfactory than management-owned cafeterias. Concessions are generally run on the "we give the men what they want" policy. Candy, pies, cakes and soft drinks are apt to constitute too great a proportion of their stock.

2. Intelligent marketing serves to keep costs down. Such marketing requires a comprehension of the nutritional values of different foodstuffs and a true understanding of the meaning, and lack of meaning, of the terms "grade" and "quality," in addition to a knowledge of where and when to buy.

3. The plant can determine the amounts of money now spent in the cafeteria by each employee who buys his complete lunch there, and subsequent menus can be made up on the basis of these findings.

4. Employing a well-trained dietitian to manage the cafeteria and supervise the marketing and menu-making serves both to increase the nutritional value of the meals and decrease the overhead.

Numerous educational channels also exist through which the problem can be presented to individual employees in an extremely effective manner. For example:

1. The company dietitian can advise employees and their families on diet.

2. Information on nutrition can be made a regular feature of plant publications.

3. Pay-envelope slips, listing items of food of good nutritional value which are in season or on the market at reasonable prices, may be used.

4. Posters or displays emphasizing the importance of good nutrition can be placed at strategic sites about the plant, especially where employees must pass or wait in line. Material which can be changed from time to time or which provokes a personal interest in the program should be especially effective.

5. Pamphlets on nutrition, provided by such agencies as the Bureau of Home Economics of the Department of Agriculture, can be distributed to workers and their families.

6. Classes in nutrition and demonstrations can be conducted by the plant physician or dietitian, or by qualified representatives of local nutrition groups, for the wives and families of employees.

7. If foods of high nutritional value are served in an attractive fashion in the cafeteria, the employees will learn to appreciate their gustatory possibilities as well as their nutritional worth.

8. When conditions permit the workers to have gardens, either at their homes or on company-owned property, their diet may be considerably improved by the use of garden produce. Efforts of the employees may be encouraged and aided by contests, classes in gardening, and collective purchase of tools and seeds. Advice and assistance on such a program may be obtained from the federal and state departments of agriculture, state universities, and county agricultural agents.

—*The Food and Nutrition of Industrial Workers in Wartime* (First Report of the Committee on Nutrition in Industry, National Research Council)

CASE STUDY OF AN APPROVED APPRENTICESHIP SYSTEM

By O. L. HARVEY
Senior Industrial Training Technician
Federal Committee on Apprenticeship
Division of Labor Standards
U. S. Department of Labor

Management, labor and government have each had a share in the development of an apprenticeship program at Pennsylvania-Central Airlines Corporation. Here is a case where a private corporation has agreed to conform to standards prescribed by the Federal Committee on Apprenticeship and has granted labor equal representation on the committee in charge. The company has differentiated, however, between *policy-making* and *administration*, the former function being under the direction of the joint committee while the latter remains in the hands of a technically expert company official. This article describes the system evolved through this cooperative effort and the simple but adequate scheme of record-keeping which has been instituted; many concerns, it is expected, will find it useful to compare Pennsylvania-Central apprenticeship methods with their own systems. Companies desiring to have similar surveys made of their apprenticeship systems are advised to communicate with the Apprenticeship Unit of the Division of Labor Standards, U. S. Department of Labor, Washington, D. C.

WHILE the history of the Pennsylvania-Central Airlines dates back to 1927, the present company was incorporated in 1936, being an outgrowth of such related companies as: Clifford Ball, Kohler Aviation, Pennsylvania Airlines, Inc., Pennsylvania Airlines and Transport Company, and Central Airlines, Inc.

Apprentices were first employed in 1934, and from that year until 1940 the apprenticeship system was conducted on an informal basis. In June, 1940, however, the apprenticeship program was completely reorganized on a formal basis under the standards of the Federal Committee on Apprenticeship and with the approval of that committee.

The company has a bargaining agreement with the Air Line Mechanics Association, International, which states that the ratio to be maintained between apprentices and journeymen "shall not be operative during any period of time during which the company shall conduct an apprentice training program that establishes individual apprenticeship agreements which are approved by the Federal Committee on Apprenticeship." In accordance with this clause, the company in June, 1940, entered into an agreement with the Association, establishing in writing a formal set of apprenticeship standards which has been approved by the Pennsylvania

State Council and by the Federal Committee on Apprenticeship in the U. S. Department of Labor.*

The purpose of the company in training apprentices is primarily to insure that its skilled workers are highly competent in the work peculiar to the company and to provide a source from which supervisory personnel may be drawn. The company points out that the nature of the work done in its maintenance and repair shops necessitates the employment of the most highly skilled workers available and makes it requisite that they be properly trained in the company's needs. The company is also thoroughly convinced that the only way in which to develop competent skilled workers is through formal apprenticeship.

In accordance with the bargaining agreement between the company and the Association, apprentices receive no seniority during the years of their apprenticeship but are awarded one year of seniority upon graduation.

The company at present has 280 employees on the maintenance staff. Of these, 179 are skilled workers and 28 are apprentices.

ADMINISTRATION AND SUPERVISION

The policy governing the apprenticeship system of the Pennsylvania-Central Airlines is determined by a joint apprenticeship committee equally representative of management and the Association. Members serve for one year, and meetings are held monthly or more frequently if necessary. Extraordinary meetings may be called by the chairman of the joint committee or by any two members through arrangement with the Supervisor of Apprentices.

The apprentice training program is under the direction of the Chief, Maintenance Personnel Training, and Apprentice Supervisor. This executive is responsible to the vice president of the company, but as regards general policy only. He handles details of administration in cooperation with the joint apprenticeship committee.

The functions of the Apprentice Supervisor—performed in all cases in cooperation with the joint apprenticeship committee—are as follows:

a. To prescribe the terms and conditions of employment and training of apprentices
b. To prescribe the minimum qualifications for candidates seeking admission to apprenticeship
c. To select candidates and interview them before appointment
d. To indenture apprentices

* Copies of these standards are available on request to the Chief of Apprenticeship, Division of Labor Standards, U. S. Department of Labor, Washington, D. C.

e. To decide in what trades and departments apprentices shall be placed
f. To set up details of the training course
g. To route apprentices through the various prescribed processes
h. To examine apprentices periodically
i. To handle disciplinary problems
j. To graduate apprentices
k. To keep records of apprentice progress
l. Occasionally to teach classes in related instruction.

Wage rates are set by the bargaining agreement.

The relationships between the Apprentice Supervisor, members of the joint apprenticeship committee, foremen and other persons in the plant having supervisory authority over apprentices are informal and friendly. As the official specifically authorized to handle apprenticeship problems, the Supervisor of Apprentices is ready at all times to discuss apprenticeship problems with apprentices and supervisory personnel, as well as with members of the joint committee. Nevertheless, according to the bargaining agreement, it is theoretically permissible for an appeal to be carried beyond the Supervisor and beyond the joint apprenticeship committee to the bargaining committee itself.

APPRENTICES

On July 1, 1941, the company employed 28 regular apprentices, the majority of whom were being trained as general airline mechanics. A few had reached the point of specialization in instrument overhaul, radio overhaul, or sheet-metal work. The apprentices were drawn in the majority of cases from aircraft mechanic schools approved by the Civil Aeronautics Administration or were selected from service crews. It is evident, therefore, that as a result of this initial selection device the candidates are young men of superior ability.

To be admitted to apprenticeship, candidates must:

a. Have American citizenship
b. Be at least of legal working age and less than 25 years old at the date of employment
c. Have completed four years of high school or the equivalent (High grades in special subjects are not required, but because of the manner of preliminary selection the vast majority of successful candidates have marked ability in mathematics and science)
d. Submit a transcript of school records and references from three persons who can attest to the candidate's character and previous experience

e. Complete satisfactorily a standard intelligence test, with special reference to aptitude and ability in spatial relations.

A personal interview with the Apprentice Supervisor constitutes the most important item in the selection process.

TERMS OF APPRENTICESHIP

Apprentices employed by the company are of two kinds: regular apprentices, all of whom are under written apprenticeship agreements; and "apprentice specialists" employed in various departments who are not under indenture.

The term of apprenticeship, which is the same for all apprentices, consists of 9,000 hours and not less than four years, or their equivalent, of reasonably continuous employment. This term includes a six months' probationary period and 576 hours of related instruction. Upon the recommendation of the Supervisor of Apprentices or that of the joint committee, and with the approval of the Vice President of Maintenance, an apprentice may be given credit for training and experience acquired prior to apprenticeship. Such credit is usually given at the end of the probationary period in order to insure fairness to both the apprentice and the management.

The company presents a certificate of completion of apprenticeship to an apprentice only if he has completed the full term. This requirement arises out of the fact that it is possible for an apprentice, or any other employee, to obtain a mechanic's license by passing the Civil Aeronautics Administration examination without having completed an apprenticeship course. Indeed, recognition is given to this condition by the following statement contained in Section 6 of the Standards of Apprenticeship: "Nothing in the Standards of Apprenticeship shall serve to prevent the company from promoting an apprentice to the rank of mechanic in less than four years when such promotion is merited on account of outstanding ability or experience." A mechanic's certificate is necessary in all cases; only apprentices who have completed their full term of apprenticeship, however, will have both the mechanic's certificate and the certificate of completion of apprenticeship.

The company has already graduated 10 apprentices who were employed under the old program prior to revision in June, 1940, but it will be another year and a half before the first fully qualified apprentice is graduated under the present program.

Apprentices work the regular hours, eight hours per day, six days a week, and work on all shifts. They are required to provide their own tools and to purchase their own textbooks; however, blueprints and certain textual materials are provided by the company.

A systematic work schedule has been developed for the training of

general airline mechanic apprentices and for those branches of the work in which apprentices may specialize in the latter part of the apprenticeship.

All training on production is given in the maintenance shop, and the training itself is given by journeymen, under the supervision of the shop foremen, in accordance with the terms of the bargaining agreement.

RELATED INSTRUCTION

All apprentices attend classes in related instruction for a minimum of 144 hours per year for each year of the apprenticeship period. The instruction is provided at the local high school by an instructor provided by the Board of Education and approved by the company. One class of 15 apprentices meets on Saturdays from 9 to 12 to receive instruction in theoretical subjects. Another class of 25 apprentices meets on Monday evenings from 7 to 9:30 to study theoretical and practical shop problems. The instruction for this latter class is provided by various employees of the company (generally supervisors) who are paid for this service by the Board of Education. Arrangements have been made with the local Board of Education to continue these classes throughout the summer with funds provided for national defense purposes.

Classes in related instruction are not limited to apprentices. All persons in the maintenance department are urged to attend, and many avail themselves of the facilities.

WAGES

The wage scale for apprentice mechanics is as follows:

1st	6 months	.....	42	cents	per hour
2nd	" "	.....	44	"	" "
3rd	" "	.....	46	"	" "
4th	" "	.....	48	"	" "
5th	" "	.....	51	"	" "
6th	" "	.....	55	"	" "
7th	" "	.....	60	"	" "
8th	" "	.....	65	"	" "

Apprentices are paid at regular hourly rates for time spent at school.

Conceiving of apprenticeship as a training program, both the company and the Association agree that there should be no special rates for exceptional apprentices and no piece-rate work. In place of cash bonuses and other cash recognition of exceptional workmanship, time credit is given on the apprenticeship term for ability and experience. The time credit to be given is determined after the completion of the probationary period.

No specific limit is placed on this time credit, but ordinarily previous

Apprentice Rating Report

	EXCELLENT	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	POOR	REASON FOR GRADE
ACTUAL WORK — RESULTS AND PERFORMANCE						
APPEARANCE — NEATNESS, TASTE AND CARRIAGE						
CONDUCT—GENERAL CONDUCT AND HABITS						
ABILITY TO LEARN—THOROUGHNESS WITH WHICH HE ABSORBS IDEAS AND INFORMATION						
WILLINGNESS TO LEARN — DILIGENCE AND WILLINGNESS TO ACCEPT SUGGESTION OR CRITICISM						
EXPRESSION—ABILITY TO CONVEY FACTS AND IDEAS CLEARLY AND EFFECTIVELY						
INITIATIVE — ABILITY WITH WHICH HE THINKS AND ACTS INDEPENDENTLY						
HEALTH—GENERAL ENDURANCE						
COOPERATION—ABILITY TO WORK WITH OTHERS						

WHAT STEPS HAVE BEEN TAKEN TO POINT OUT APPRENTICE'S WEAKNESSES AND WHAT CORRECTIVE MEASURES ARE INVOLVED?_____

DOES APPRENTICE HAVE REQUIRED TOOLS FOR TYPE OF WORK HE IS DOING?_____

IF NOT, WHAT TOOLS ARE NEEDED?_____

DOES APPRENTICE MAINTAIN HIS TOOLS PROPERLY?_____

SHOWS PARTICULAR APTITUDE AS_____

OTHER COMMENTS:

RATED BY:

_____

_____

_____

(PLEASE SIGN—DO NOT TYPE)

(DO NOT WRITE HERE)

POSTED BY_____

APPROVED BY_____

ORIGINAL—SUPERVISOR OF APPRENTICE MECHANICS

DUPLICATE—STATION OR SHOP FILE

training obtained in schools is credited on a 50 per cent basis and actual experience on a 50 per cent to 100 per cent basis, depending on the type of actual experience previously acquired.

OTHER TRAINING PROGRAMS

Like other airline companies, Pennsylvania-Central Airlines is faced with training problems arising out of the scarcity of all-round skilled craftsmen. Heretofore its policy has been to employ all-round craftsmen or apprentices in training to become all-round skilled craftsmen. It is now finding, however, that it needs to develop a group of craftsmen who have specialized in certain fields and do not have the all-round knowledge and skill of the thoroughly trained worker. These men specialize from the beginning in specific operations, such as carburetor repair, instrument overhaul, sheet-metal work, etc.

The company, therefore, has developed, in addition to its regular apprentice training program, a program for the training of so-called "apprentice specialists." These apprentices do not serve a definite period of apprenticeship and receive no certificate of completion. They are not under written indenture; nevertheless, when trained, they will assist to some extent in the training of all-round apprentices.

In connection with this program the company is faced with an additional problem. "Specialist apprentices" are paid more than regular apprentices. Consequently the regular apprentices have expressed some dissatisfaction and have argued that their wage scale should be raised. So far, however, the difficulty has not proved serious. The Supervisor, together with members of the joint committee, has been able to convince the apprentices that the more complete formal training program leading to all-round craftsmanship will eventually prove of greater benefit than partial expertness derived from specialist training. As the company points out, the chief value of an all-round man is his ability to diagnose and correct defects. For this reason more than any other he is paid the wages he receives. Furthermore, only men with all-round training can do satisfactory supervisory work. In other words, the future of an all-round trained apprentice is much more stable and his possibilities of advancement are considerably greater than those of the "specialist apprentice." This argument has apparently had the desired effect.

STATISTICS

During the year since June 1, 1940, the company has hired a total of 51 regular apprentices. Ten of these were graduated under the old apprenticeship plan; six left to enter military service; two gave up apprenticeship

for financial reasons and were transferred to other classifications but remained in the employ of the company; two dropped out before completion of their apprenticeship to seek employment elsewhere; three were released because they were not mechanically inclined; and 28 are still in their apprenticeship.

RECORDS

The individual apprentice agreement or indenture (the text of which is reproduced in the appendix) includes as part of its conditions the Standards of Apprenticeship.

Apprentices maintain their own shop records on a form known as the "Monthly Work Assignment and Rating Report." A separate record of this nature is kept for the engine shop, the propeller shop, accessory overhaul, line maintenance, refinishing department, sheet-metal shop, and airplane overhaul.

The Apprentice Supervisor maintains an "Individual Experience Record" on each apprentice mechanic. This record covers the four years and shows the amount of time the apprentice has spent in each shop during each month of his apprenticeship. From it the Apprentice Supervisor may determine at the end of any month the total number of hours each apprentice has worked and the distribution of his time in each of the various departments.

In addition to the shop work records, there is a record of the number of hours spent in school attendance, compiled from time cards signed by the school teacher. Under the date of the class meeting is recorded the number of hours each apprentice has spent in the class.

APPENDIX

APPRENTICE AGREEMENT

(Pennsylvania-Central Airlines Corporation)

THIS AGREEMENT, executed in triplicate this.....day of..... 19....., between PENNSYLVANIA-CENTRAL AIRLINES CORPORATION (hereinafter called the "First Party") and.....
(Apprentice)
Date of Birth..... (and if minor).....
(Name of Parent or Guardian)
(hereinafter called the "Second Party/Parties"):

WITNESSETH, That the First Party agrees to employ said..... as an apprentice in the trade or craft of..... in consideration of said.....agreeing to diligently and faithfully perform the work incidental to said trade or craft during the period of apprenticeship, in accordance with Exhibit A and Exhibit B (Standards of Apprenticeship) hereto attached and made a part hereof.

IN WITNESS WHEREOF, said parties have caused this agreement to be executed the day and year first above written.

..... (Apprentice)

..... (Address)

..... (Parent or Guardian)

..... (Address)

PENNSYLVANIA-CENTRAL AIRLINES CORPORATION

By .....

..... (City)

EXHIBIT A

PROBATIONARY AND APPRENTICESHIP PERIOD—(here should be stated the probationary period and length of time to be served).

(space)

SCHEDULE OF PROCESSES TO BE WORKED—(here should be stated the process, method or plans to be taught and the approximate time to be spent at each process, method or plan in order to conform to the character of the individual trade or craft).

(space)

RELATED SCHOOLING—(here should be specified the number of hours of school attendance required to complete the apprenticeship).

(space)

RATES OF COMPENSATION—

(space)

SPECIAL PROVISIONS—

(space)

PIONEERING THE PART-TIME TRAIL

Before long, it has been estimated, industry will require the services of one out of every three or four housewives between the ages of 18 and 44. But for a great many women in this group home responsibilities make full-time employment impossible. The solution may be part-time shifts; English firms, in fact, are already experimenting with shorter schedules for homemakers unable to take on full-time work. This article, reprinted from a recent *Engineering Bulletin* published by the British Ministry of Labour and National Service, describes how the plan has worked out thus far in Great Britain.

AS the war goes on, it becomes increasingly clear that the linchpin of victory is production. Output is the basis of that offensive action which alone can defeat the forces arrayed against us, and we can leave no source of labor untapped. To produce the tremendous supply of armaments and munitions needed we must call up more reserves; particularly the women who, chiefly because of domestic responsibilities, can give only part-time service to industry.

To enlist this huge army of potential part-time workers is no easy task. There are snags which cannot be ignored, but none which cannot be overcome by tact and good will. Evidence from employers who have had experience with part-time schemes shows how this form of employment can be used successfully. Let us look at some of the difficulties that may confront management in initiating schemes of part-time employment.

It is rightly contended that extra clerical work will be involved, since the additional staff will necessitate extra work for progress chasers, time clerks, accounts clerks, etc. But the cost of the additional clerical work is proportionately less if part-time workers are employed on a considerable scale and suitable administrative adjustments are made. If a firm has difficulty in securing additional clerical workers, the cause of the trouble may prove to be its cure—part-time clerks may be recruited.

There may be difficulty also in adjusting part-time shifts to the production plan, or in achieving a balance between day and night work. The possibility of friction among the various classes of part-time workers, or between part-timers and full-timers, may need consideration. For these reasons it is sometimes objected that the introduction of part-time workers would prejudice continuity of production. Let us examine such objections by the light of experience.

It has been found that part-time workers cannot normally be introduced where a three-shift system is in operation, nor is the method normally suitable for night work. Many firms, however, have adopted a system of

two six-hour day shifts for part-time workers, with a periodic changeover between the morning and afternoon shift, and have found the scheme works satisfactorily.

FINISHING THE WORK

Because a prolonged workshop operation cannot be completed in a half-day shift, a Birmingham firm engaged in light electrical engineering work tries to hire its employees in pairs, and places upon each partner the obligation to attend work until a job, once begun, is finished. At another factory, part-timers have proved successful in various departments, even though the time available on one shift is not sufficient for the completion of the operation. There each woman puts aside her work until she can resume it on her next shift.

Where possible, however, it is advisable to give part-time workers (a) jobs that can be finished in half a day, or (b) jobs where the rate of output does not vitally affect the general flow of production. Work on presses, capstans, etc., and work of a repetitive nature which one operator can easily take over from another is, therefore, particularly suitable for the woman who can give only part of her day to war work.

HOME RESPONSIBILITIES

It may be objected from both the employer's and the part-timers' points of view that part-time work necessitates "divided loyalty" between home and work, but this is inevitable where women having home responsibilities are concerned. Employers often feel that there is more likelihood of absenteeism and tardiness when women have the care of a home and family as their first consideration, but absenteeism is reduced, and timekeeping generally better among part-timers than among full-time workers with the same home responsibilities.

Moreover, the extension of day nurseries is likely to ease this aspect of the problem considerably. Where mothers of young children are affected, the government is concerned that suitable nurseries should be provided as expeditiously as possible. In several factories crèches have been established by the management.

HOW TO SELECT THE WORK

Experience suggests that the following general principles form a useful basis for judging what types of work are most suitable for part-time women workers:

1. Jobs which are clean and light are likely to attract part-time workers more than work of a heavier or dirtier character.

2. On certain repetitive operations part-time workers are more effective than whole-time workers. Because they are employed for fewer hours a day, the monotony affects them less.
3. On certain heavy work such as warehouse and stores laboring, on which women cannot be employed full time, it has been found that half a day's work is well within their powers.

A list of the chief occupations in the engineering industry in which part-time workers have been successfully employed is given below, and serves to show that even the already accepted field is a wide one:

Assembling
Drilling
Milling
Inspecting
Packing
Laboring
Eyeletting
Coremaking
Store-keeping
Time-recording
Burr bench work
Electric wiring
Nut and bolt work
Soldering
Oxy-acetylene welding
Sheet-metal working
Viewing bench work
Fettling castings
Machine operating (small-arms factories)
Bench work (fitting, etc.)
Capstan operating
Press operating

In the airframe industry employment of part-time women workers would facilitate the transfer of the present full-time workers to more difficult assembly jobs, or to work on capstan lathes and other machine tools which, in the airframe industry, require frequent resetting. Following is a list of airframe jobs suitable for part-time workers:

Operating presses—hand and power
Stamping and engraving part numbers
Pre-drilling skins, and any pre-drilling to jigs or templates
Small sub-assembling
Riveting
Burring and fraying from machine and press shops
Detail wiring
Detail inspection using simple gauges
Assisting draw mill operators
Holding up for riveters and assemblers
Simple milling or drilling in machine shops

Foremen often voice strong objection to the employment of part-time women workers, but their gloomy expectations generally prove groundless. The verdict of one firm of wide experience is probably typical. "First our supervision opposed it," the firm reports, "but now they are full of praise for the idea and have withdrawn all their previous misgivings."

There are obvious advantages to be gained by concentrating part-time workers in one factory unit or department. The job allotted to them can then be carried out in the same room and under the same supervision, and the manager and foreman can accustom themselves to the problems peculiar

to part-time shifts. Where the part-timers have to mix with the full-timers, care should be taken to enlist the good will and cooperation of the regular workers.

One large firm found it helpful if the part-timers were always called "auxiliaries." It was explained to them, and also to the regular staff, that the term implied "people who rallied to the support of an army in an emergency." It is particularly desirable, also, to explain matters to full-timers when they are transferred from jobs in which they are skilled to other work where it may take them some weeks to acquire skill, in order that part-time workers may be taken on. Arrangements should be made that those thus transferred do not lose financially.

POSSIBLE SCHEDULES

Probably the chief factor in the success of a part-time scheme is adjustment of the proposed hours of work to conform with the domestic responsibilities of the housewives whose services it is desired to enlist. Generally the best arrangement is to offer the alternative of two day-time shifts, conforming to the ordinary hours of the factory. For example, 7.30 a.m. to 12.30 p.m. and 1.30 p.m. to 6.30 p.m., or 8 a.m. to 12.30 p.m. and 1.30 p.m. to 5.30 p.m.

Some factories have a system of two day-time shifts with no break between them, e.g., 8.30 a.m. to 12.30 p.m. and 12.30 p.m. to 5.30 p.m. The elimination of the lunch hour may, however, place an additional burden on setters, chargehands and foremen, and so may not be practicable.

The system in operation at one plant of a large transport concern is rather unusual but may suggest possibilities for other districts. This company employs auxiliary women from 6 p.m. to 9 p.m. Monday to Friday, 8 a.m. to 12 noon Saturday, and 9 a.m. to 5 p.m. Sunday. The machines used during the evenings and on Sundays are those normally operated by boys who are precluded from working overtime, and the Saturday part-time workers enable the full-time women workers to do their shopping on their "off-day."

As stated earlier, it is not normally possible to employ part-time workers on a three-shift system or on night work, for unless more full-time workers are concentrated on the night shift, the machines operated by part-time workers during the day must stand idle at night; and full-time workers may resent being called upon to undertake additional night work. It may be possible in some districts to get over this difficulty by having part-time night shifts for the clerical staff.

From the foregoing facts a good idea of the potentialities and the problems of part-time employment can be obtained. It is emphasized

that the idea is not entirely new or experimental. The trail has been blazed by many enterprising firms; in the London area alone there were, by the end of 1941, nearly 100 industrial establishments with successful schemes for part-time labor.

To convert the trail already blazed into a great highroad to victory is the urgent necessity now facing all who are concerned with the supply of labor for war production.

Home War Work Battalion

TO make its employees conscious that they can play a part in the war effort even though the firm is not directly engaged in war work, the Chicago Mail Order Company has organized a Home Front Battalion. Each employee who becomes a member enters as a buck private, but as he proves his patriotism by deeds he is credited with points which bring promotion. When he has earned 100 points (which means he has done enough war work to equal the efforts of about 50 average citizens), he receives the rank of general.

Employees receive credit for efforts to collect scrap, blood donations to the Red Cross, membership in the War Bond Ten Per Cent Club, perfect attendance at work, preparation for civilian defense, letters sent to men in the service, and work in all phases of the war program. They pay dues by buying at least 50 cents worth of War Savings Stamps monthly, over and above their payroll deductions.

The emblem for the Battalion is a circular red, white and blue celluloid pin with a bull's-eye design, similar to the insignia of the air forces. For each promotion in rank, a commission, which the employee may display at his workplace, is granted.

The organization was founded by the employees, and they have entire charge of it, electing their commanding officers from among the highest-ranking members.

—*American Business* 8/42

TRAINING FOR WAR PRODUCTION WORKERS

Though thousands of employers have availed themselves of the services of Training Within Industry, few are aware of the wide range of training facilities provided by other government agencies. The U. S. Office of Education, for example, offers diversified war production training to industry without charge—pre-employment courses, supplementary courses, supervisory training, and apprentice training. The following is an up-to-date account of various training programs of the Office of Education that can be adapted to management's specific needs.

THIS year constitutes the third fiscal year in which the program now known as Vocational Training for War Production Workers has been functioning. In this fiscal period (i.e., 1942-43) the program derives its authority from that part of Public Law 647, 77th Congress, 2d Session, headed Education and Training for Defense Workers. This legislation appropriates $94,000,000 "for the cost of vocational courses of less than college grade" provided by public agencies in vocational schools.

The guiding principle of administration is that the War Production Training Program is essentially a cooperative arrangement between the U. S. Office of Education, representing the interest of the Federal Government, and the state boards for vocational education, which have the actual responsibility for operating the program in their various jurisdictions.

The operation of the training program—that is, the hiring of teachers, conduct of classes, and other related activities—is the responsibility of the respective state boards for vocational education in each state and territory and, through the state boards, of the local boards of education. In each state the state director of Vocational Training for War Production Workers is the executive officer immediately in charge of the program. It is the state director with whom employers should communicate with regard to special training problems. His main office is usually in the capital city of the state.

Essentially Vocational Training for War Production Workers, as well as the regular vocational training program, was created for the sole purpose of providing the training required to achieve necessary levels of production. In a sense there is no set "course" or "program" in defense training. Individual courses are designed to train workers for specific jobs. These courses are continually revised to meet the changing demands of war industry. Although the training provided falls into the categories shown below, it is well to remember that within the limits of the Act and the Regulations the schools can cooperate in providing training of less-than-college grade to meet any war production need. The employer will usually find the desired training included in one of these types:

A. *Training for new workers to be placed on beginning payroll (preemployment courses)*

Employers in established industrial areas will usually find courses in existence from which the employment service can refer trained applicants for the commoner jobs such as lathe operation, welding, riveting, etc. Training for other occupations can readily be arranged upon request to the local supervisor of war production training upon the recommendation of the local advisory committee. Normally these courses run from 30 to 48 hours per week for trainees registered with the U. S. Employment Service. Conversion courses for workers who are employed in non-defense industry may be operated for shorter periods. In order to make the best possible use of these facilities, the employer should insist that in referring men for training, the foreman work with the local supervisors and the instructors in adapting the subject matter of each course to the jobs for which training is offered.

B. *Training for employed workers (supplementary courses)*

The speed with which workers must often be recruited and promoted to key jobs makes it frequently necessary to offer extensive training to employed workers. Much of this training must be given on the job. Very effective training may be provided, however, in especially designed courses operated by the vocational schools. These supplementary courses may be designed to meet one or more of several objectives:

1. *Development of additional skills*

   Industry's extensive engineering of production jobs to provide for the employment of large numbers of unit-skilled workers makes it essential that these workers acquire additional skills after they are employed if the labor force is to have necessary flexibility. These additional skills may be developed in supplementary courses established at the request of the employer.

2. *Imparting related technical information or "job knowledge"*

   This type of information is necessary in the development of all-round mechanics and lead-men or foremen. Every effort is made to avoid courses of a general nature; for example, courses are not given in general blueprint reading but in blueprint reading for specific jobs.

3. *Conversion training*

   An employer who finds it necessary to convert part of his plant to a new type of production usually must train workers for the new jobs. Through a cooperative study by the foreman and local supervisor for vocational training, it will usually be possible to provide much of this training in the schools.

C. *Apprentice training*

Along with the demand for unit-skilled workers, the employer also has greater need than ever for well-trained all-round mechanics such as may be developed by thorough apprentice training in cooperation with state and local representatives of the federal apprentice section of the War Manpower Commission. The vocational training agencies have developed a sound program of apprentice training which can be adapted to the needs of most employers. Under this cooperative setup, labor standards such as hours, wages, etc., are the responsibility of the apprentice committee, and the related technical training is a function of the vocational schools.

D. *Training for supervisors*

1. *Job instructor training*

It is rather generally recognized that an important function of every supervisor is the breaking-in of new workers. To meet this need, the Training Within Industry Branch of the War Manpower Commission, in cooperation with the Office of Education and state departments of vocational education, developed the now-famous 10-hour Job Instructor Training (JIT) course, which has been given without charge to thousands of foremen in hundreds of plants throughout the country under the joint supervision of Training Within Industry and state and local vocational education departments.

2. *Instruction for plant training personnel*

Employers who operate well-organized training programs will find it difficult to secure supervisory personnel who are sufficiently trained in methods of developing instructional material to provide desired training for line supervisors. Such training can usually be arranged for by local supervisors of vocational education or by specialists provided by most of the state departments. States unable to supply this service on demand may obtain assistance from the Foreman Training Unit of the Office of Education.

3. *Other foreman training.*

In addition to the foregoing two types of supervisory training, most states are in a position to provide, through the local supervisors of vocational training, valuable service in training foreman conference leaders and in conducting foreman conferences for the purpose of determining training needs and suggesting plans for meeting these needs.

E. *Special services*

As indicated above, this entire training program exists for the sole purpose of providing the training needed by industry. An employer who finds himself in need of some special training not indicated above should contact the State Director of Vocational Training for War Production Workers.

New Trends in Collective Bargaining

LABOR and management in leading American industries show a marked tendency to broaden the base of collective bargaining contracts and work out regional, national and—increasingly—industry-wide agreements. This is one of the central facts to emerge from a comprehensive survey of labor-management relations in 16 major industries just completed for The Twentieth Century Fund and published under the title, *How Collective Bargaining Works.**

Accompanying these findings is a statement issued by William H. Davis, Chairman of the National War Labor Board, in which he calls for greater organization among owner and management groups to give them equality of bargaining power with some of the larger unions. Mr. Davis served as Chairman of a special Labor Committee, appointed by the Trustees of the Fund, which helped to outline the scope of the survey and supervise the work of the research staff.

"Industry-wide collective bargaining seems a logical next development," says Chairman Davis in his special statement. "It makes for greater stability throughout an industry, more responsible unions, and puts management on a fairer and more equitable competitive basis so far as wage costs are concerned.

"It seems to me that what we principally need now is more organization among employer and management groups. Such organization would do much to promote an equality of bargaining power between management and labor. As this Twentieth Century Fund survey abundantly shows, collective bargaining in America is coming of age. We can gain much by examining methods and practices, industry by industry, to see what practices have failed here, what methods have succeeded there, and using this experience to build a sound and mature structure of collective bargaining in this country."

REGIONAL AND NATIONAL AGREEMENTS

The opening chapter of the report itself notes that in collective bargaining contracts "regional and national agreements are increasing. . . . They are found, for example, in stoves, hosiery, coal, shipping, paper and pulp, clothing, glass containers and pottery.

"Such agreements usually result in standardization of labor conditions over wider areas—often an important contribution to the stability of collective bargaining. In the face of large wage differences, the standards in any one firm or plant may be subject to severe pressure, and the union's position jeopardized. During the last decade such pressure was intensified; unions were forced to give greater attention to the relationship between wage rates in different plants; and, except in such cases as the building trades and cleaning and dyeing, where the market is local, they have increasingly sought industry-wide agreements or industry-wide uniformity of agreements."

Pointing out one great reason for this development, the report says: "The rise of industrial unionism . . . was partly, if not largely, responsible for the extension of collective bargaining. Today industrial or semi-industrial unions provide the dominant organizational and bargaining patterns."

The report stresses spectacular gains "in hitherto unorganized, or practically unorganized, trades and industries. . . . The Steel Workers Organizing Committee (now the United Steelworkers of America) claimed in 1941 roughly 600,000 members; the United Automobile, Aircraft and Agricultural Implement Workers, 600,000; and the United Electrical, Radio and Machine Workers, around 300,000. Additional thousands of union members were in the rubber, aluminum and flat glass industries. Other fields of economic activity, such as office and professional work, agriculture and canning, and editorial and commercial work on newspapers, have also been reached by the organized labor movement."

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* *How Collective Bargaining Works.* The Twentieth Century Fund, New York, 1942. 1,014 pages. $4.00.

Summing up, the report says, "Collective labor agreements, therefore, cover . . . more than a quarter of the nearly 40,000,000 wage and salary workers actually employed in 1941."

These figures are given by Dr. Philip Taft, of the Economics Department of Brown University, who wrote an opening chapter on "Organized Labor and the New Deal." Research work for the survey as a whole was directed by Dr. Harry A. Millis, who selected the staff of contributing authors and edited their findings until he resigned in November, 1940, to become Chairman of the National Labor Relations Board.

In terms of percentage of coverage, the report says: "In 1940 only two giant American industries were almost 100 per cent covered by union agreements—the railroads, with about a million employees, and coal mining, with half a million. But about three-fourths of the 500,000 auto workers were under contract; so were over three-fifths of the steel workers and the 400,000 workers in electrical manufacturing, together with well over half of the nearly 2,000,000 in construction.

"The addition of such industries as rubber, private shipbuilding, men's and women's clothing, and meat packing, each employing over 100,000 and from half to almost 100 per cent covered by labor agreements, makes clear the vital role that collective bargaining plays in the United States."

On the other side of the picture, the report says: "Yet in spite of this rapid progress since 1933, nearly three-quarters of American wage and salary workers are not members of trade unions or covered by collective agreements. Collective bargaining has made little headway among the 6,500,000 wholesale and retail trade employees, the more than 4,000,000 in the financial and service trades, the 4,000,000 government employees, or the 3,000,000 agricultural workers. In addition, hundreds of thousands in textiles, in chemicals, and in other important industries are without union agreements."

ADJUSTMENT ESSENTIAL

Meanwhile, other industries make steady progress toward industry-wide collective bargaining. The report repeatedly emphasizes the importance of a proper attitude on the part of both labor and management in making the arrangement workable. Difficulties in this regard are noted particularly by the author of the chapter on the rubber industry, which is only partly unionized. "In plants where collective bargaining has gained a foothold, management and union now face a fundamental problem of learning to live together, whether they like each other or not. That would not be an easy problem even if management fully accepted unionism. Considerable adjustment is necessary on both sides. . . . The indispensable first step in satisfactory collective bargaining is unqualified recognition of unionism by management and then a willingness on both sides to 'play ball' under fair rules."

Workers in the steel industry, the report says, temporarily gave up their efforts to achieve industry-wide collective bargaining in order to attain more immediate goals. At the present time, the steel workers' union "bargains with each steel company separately. At the outset, its aim was to establish collective bargaining on an industry-wide basis, for the major economic problems in steel are common to the industry as a whole and beyond the scope of the existing type of collective bargaining." The report stresses the fact that the union still hopes to achieve industry-wide collective bargaining at some time in the future.

ADVANTAGES OF INDUSTRY-WIDE BARGAINING

Some of the benefits of industry-wide collective bargaining for both labor and management are set forth in detail in the chapter on glass. "The value of collective bargaining on an industry-wide scale is also shown by experience in the glass trades. The annual wage conferences have enabled the best talent and brains in the industry to focus their attention upon union-management problems. The less intelligent company and union leaders are guided by the wiser; men new to the system are acclimated by the experienced. At the same time, young blood has prevented stagnation. By centralizing collective bargaining, a plentiful

exchange of ideas and practices has been attained, allowing the more backward plants to benefit from the more advanced.

"Industry-wide collective bargaining has been significant on the economic front as well. One of unionism's major goals is uniform labor standards throughout the competitive market—with due exceptions, of course, for peculiar local conditions. In this way standards are not undermined by competitive undercutting. The joint industry conferences have supplied this uniformity far more effectively than would be possible through local or company negotiations."

What Do You Mean, "Dilution"?

"THE production problems in rapidly expanding industries can be met only by job 'dilution'" or "the skills of mechanics must be 'diluted' so semi-skilled men can be used in more jobs and quickly trained for production."

Such statements are untrue and make for confusion and misunderstanding. When the tolerances specified on a job require skill in meeting them, the kind and degree of skill is the same whether the job is performed by a worker highly skilled in that one operation or whether it is performed by a worker who is able to do many other skilled operations but is using only the specific skill required on the particular job. In other words, the journeyman mechanic differs from the skilled operator only in that the journeyman has acquired the many skills required in his related work or trade. The skilled operator is equally skilled on one or a very few operations. He possesses skill but lacks the versatility or variety of skills of the journeyman.

Regardless of the degree of a worker's skill, only that part of it that the job itself demands, can be used in individual production operations. Using a worker with wide or exceptional skill on production parts which do not require it is a waste of skill, because the skill a particular job demands is the same whether the job is done by one who can do only that job or by one who can perform many others equally well. Frequently the single-skill operator can perform more quickly and more accurately his one operation than can the all-round or journeyman craftsman. In training men for special operations or for upgrading, skill therefore is not diluted. New skills are acquired, and there is an increase in skill.

Production work may be so engineered that several men with single skills can more quickly produce finished parts than can a similar number of all-round skilled workers. There is a waste of skill when a journeyman is not employing his highest skill during the maximum of his work time. There is waste of skill when highly skilled men work on phases of a job which less skilled workers could perform.

Dilution of work or dilution of skill of workers is a negative statement. When jobs are engineered so that workers of varying degrees of skill can perform the various steps and workers are trained to acquire the skills necessary to perform these skilled operations, there is a total increase in skill. Training for perfection on each operation is the constructive objective whether for the production worker or machine operator on a specific operation or for the all-round mechanic.

Intensive instruction, upgrading, rotation, organized work experience, related knowledge—all contribute to increase of skill. They are the constructive, positive answers to meeting demands for more skill in an emergency. At times when there is full-time work available for all industrial workers, it is certainly good business from both management and worker viewpoints to have each worker make the fullest use of his best skill. Only through such use of the intelligence and skill of the nation's manpower will production keep pace with defense needs in this emergency.

—*Training Within Industry* 8/42

THE PERSONNEL BOOKSHELF

How to Conduct Conferences. By Alfred M. Cooper. McGraw-Hill Book Company, Inc., New York, 1942. 190 pages. $1.75.

Reviewed by Carl Heyel

THE conference is one of the most useful and versatile pedagogical devices available to industry. Mr. Cooper's practical book—built out of his experience in leading thousands of conferences—serves to underscore the advances that have been made in the technique during the 30 years or so since its first application in industrial training.

While the book's emphasis is on foreman training ("The qualifications of a good supervisor," says Mr. Cooper, "and those of a good conference leader are almost identical"), it also addresses itself to the business conference, selling by the conference method, and further applications of the conference—as in legislative, club, and business committee work, and in religious education. (The five-point self-check list in Chapter VII should be read by every high-powered business executive whose habit it is to call a "conference" of his subordinates and then proceed to lay down the law in a long monologue.)

After giving practical pointers for the conference leader (especially unpleasant mannerisms to avoid) and basic elements of the conference, the book outlines a simple seven-point formula for developing a successful conference: aim; motivation; materials; introduction; development; application; and assignment. Chapters IV, on developing discussion questions, and V, on group motivation, will be especially useful to anyone who is responsible for conducting conferences, but whom lack of experience may make somewhat uneasy as to how to "break the ice." Such a person will also find useful pointers in Chapter IX on how to get the group to develop its own course outline for subsequent sessions.

The conference rating sheet described in Chapter VI will, perhaps, be more valuable to the leader himself than to the "conference critic" for whom it was designed. Probably not many companies would want to take such an elaborate step, as the author envisions, of assigning a conference rater to the task of attending and evaluating all conference sessions. Even though he cannot hope to be entirely objective about it, the leader will do well to keep the rating points in mind while he is conducting his session, and then actually rate himself on the sheet as soon as possible after the conference. The rating sheet provides scales on which to grade both the leader and the group—the former on the liking he engenders, the respect he is accorded, the quality of his statements, and his presentation; the latter on interest displayed, amount of participation, and quality of participation.

This reviewer has heard much footless discussion in management gatherings about the value of the conference method, compared with other teaching techniques. Therefore it seems well that the author has taken time out to discuss the basic requirements underlying use of the method. To participate in a conference intelligently, he points out, the individuals who comprise the group must have some knowledge and experience in

line with the problem under discussion.

While this prescription obviously fits most supervisory development, Mr. Cooper contends that the conference method can be much more widely applied in industrial and commercial training. He points out that in industrial training most of the subjects are not entirely new to the trainees (as, say, algebra is to the high school student, who would certainly have nothing to contribute to a "conference" on it). Thus, when a corporation decides to give its workmen training in accident prevention, it is obvious that the employees have been avoiding accidents for many years and therefore already know a great deal about the subject from their own experience.

One cannot but agree with the author that, on the basis of its record so far, the conference method should be given broader application by management than it enjoys today.

Industrial Psychology. By Joseph Tiffin. Prentice-Hall, Inc., New York, 1942. 386 pages. $4.65.

Reviewed by Edward N. Hay

INDUSTRY is slowly but surely beginning to realize how much the psychologist can contribute to management techniques, especially if he has had some experience with industrial problems. Neither psychological training nor industrial experience alone is sufficient if the best results are to be attained; both must be thoroughly combined.

Dr. Joseph Tiffin is an eminent psychologist who has had extensive experience in industry. As Professor of Industrial Psychology at Purdue University, he is well known in academic circles. His industrial consulting work has given him an exceptional opportunity to apply his psychological training to industry's problems.

"Industrial Psychology" is aptly titled, since it covers the entire field. Many personnel men think of psychology only in connection with intelligence tests, but a small number of well-trained psychologists have demonstrated that there are many other ways in which the psychologist can help industry. The industrial psychologist, like any other real scientist, does not assume *a priori* that a particular theory, however logical, necessarily holds the solution to a given problem. He experiments, observes, measures and reaches conclusions.

Dr. Tiffin deals with some of the many ways in which the psychologist's services can be of value in solving industrial problems. Among the fields of work open to the industrial psychologist are:

Employee testing
Visual problems
Training employees
Work fatigue and efficiency
Merit rating
Industrial inspection
Safety and accidents
Attitudes and morale.

Dr. Tiffin wisely begins his book with a chapter on "The Significance of Individual Differences in Industry." He demonstrates that in all human qualities a few of us excel, a few are deficient, but most of us are rather average. Psychological testing is based on a recognition of this phenomenon. Tests have been developed for measuring these differences and relating them significantly to the requirements of various jobs. For example, if it is found that there is a wide range in scores on a manual dexterity test and it can be proved that there is a definite, if not perfect, relationship between the scores on the test and production on a given operation, then, obviously, if we hire the applicants who score highest on the test, we shall, on the average, be selecting those who will prove to be the best producers. This is a much shorter, cheaper and more

humane way of getting the right workers on the job than the unscientific system of hiring indiscriminately, discharging those who fail on the job, and hiring others. Tiffin points out that the great value of employee tests lies not altogether in the selection of employees but in their proper placement. This sound conception of the importance of testing is especially timely today when in some industries practically every able-bodied worker who applies is hired.

Good vision might not ordinarily be considered a problem for the psychologist. However, much of Tiffin's work has been concerned not only with measuring vision in its various aspects but also in determining the degree of each type of vision required for certain jobs. The chapter on visual problems of industry is of special importance. Here he shows, among other things, the importance of vision in job simplification.

The chapter on training is particularly interesting also. Many industrial training specialists have not troubled to study the "laws of learning" which have been defined by psychologists. Another subject to which the psychologist has made an important contribution is merit rating. Tiffin's own work in this field is important, and he refers to a number of the excellent studies undertaken by others, including those of Driver and Wonderlic. Driver's demonstration of the importance of thorough training for raters is particularly noteworthy. After reading this chapter, personnel men should approach rating problems with a great deal more respect for the contribution of the psychologist than has heretofore been the case. Tiffin discusses the many important considerations involved in rating, such as the undesirable effect of "halo," the weighting of traits, the content of rating forms, and various techniques of rating. He considers the problem of pooling the ratings of a number of judges, and touches on the failure to determine the reliability of ratings.

There is a valuable chapter on accidents and safety which points out the importance of correct vision in safety, and an extensive discussion of testing with numerous illustrations of various tests. The controversial topic of personality tests is also covered. The chapters on inspection and on attitudes and morale are useful also. Throughout Dr. Tiffin has interspersed appropriate references which enable the reader to obtain additional information on points of special interest. Particularly useful is an appendix describing elementary statistical procedures and including a discussion of measures of central tendency, those of variability, and the more important methods of correlation of two variables.

Tiffin's volume is without doubt the most thorough and up-to-date work of its kind. It is well organized, clearly written, and deals with its topics in a sound and practical manner. This book is a "must" for every industrial personnel man.

THE LAW OF LABOR UNIONS. By Edward M. Dangel and Irene R. Shriber. National Law Publishers, Boston, 1941. 752 pages. $15.00. Federal, state and municipal regulations governing labor unions and employers' relations with labor unions are here interpreted in the light of court decisions. Sections cover: definitions and distinctions; specific laws—the Sherman Act, the Clayton Act, the Norris-LaGuardia Act, and the National Labor Relations Act; state anti-injunction and labor relations acts; union organization; collective agreements; strikes and picketing; boycotts (primary and secondary); interference with employment; actions and suits by or against labor unions; etc. The authors, both members of the Massachusetts Bar, have done an exhaustive job of collecting and synthesizing thousands of court decisions. While intended primarily for lawyers and members of business legal departments, the book should be of value to any executive whose work involves dealing with labor unions.

Plant Problems of Women Workers

AMERICAN industry—small plants and large, from textile mills to iron foundries—is already employing more women or is preparing for such employment in the immediate future, a survey of 1,000 top management executives by *Modern Industry* reveals. The survey also covered many of the problems of management arising from the employment of women.

Answers to a question on the types of job in which employment of women is considered economical indicated that virtually any job done by men—with the exception of the heaviest types of physical labor or work in extremely hazardous occupations—can be done and is being done by women.

A series of questions answered by industrial executives threw some interesting light on changing management views on the employment of women. The "all-women" department is apparently disappearing from the American industrial scene, as only 16.2 per cent of the employers of women reported favorably their experience in segregating women to all-female departments. In contrast, 47.7 per cent of the employers reported that women and men work in the same departments although women are segregated, in effect, by their job classifications. However, 50.5 per cent reported men and women working side by side satisfactorily.

A preponderance of management opinion favors the supervision of women by men foremen. Sixty-eight per cent of employers favored men supervisors, and of these 48.7 per cent indicated that they favor the employment of women subforemen or welfare workers to aid men supervisors in charge of women. The female welfare worker in the shop is a comparatively recent adaptation of British experience in the war.

A majority of employers (57.1 per cent) favor the employment of married women. Of those favoring the employment of married women, 37.5 per cent added that they preferred mothers. Preference for women living at home was indicated in 51.4 per cent of the questionnaires. In 10 per cent of the instances, employers favor the hiring of women with relatives already in the employ of the company, and in 16.2 per cent, a preference for the employment of women with relatives in the armed forces was indicated. High school education was required in 63.2 per cent of the cases, but in only 21.8 per cent did an employer find that college training was helpful in industry.

Fifty-eight per cent of the employers indicated that they have had to build additional toilet facilities to enable them to hire women, and 23.4 per cent indicated that such facilities will be required in the immediate future.

Another series of questions asked of company executives related to the dress of women industrial workers. The replies indicated that a majority of women still work in skirts—but that majority is being seriously threatened by the rising use of slacks. In 47.7 per cent of the reporting plants, women workers wear whatever they please; in 31.5 per cent, special work clothes are worn; while in 17.1 per cent some women workers wear special clothes and others wear what they wish.

In 60.7 per cent of the plants special work clothes are provided by the workers themselves and in 30.4 per cent by the employer. In 8.9 per cent both policies are followed. In 65.1 per cent of the cases, special work clothes were purchased from local dealers; in 34.9 per cent, from manufacturers. The survey indicated that the average garment costs $1.25 and that two garments are owned by each employee.

Flying hair, particularly in manufacturing departments, represents a serious safety hazard, employers reported. To meet this danger, hair nets are being worn in 22.5 per cent of the plants, uniform caps in 14.4 per cent, turbans in 3.6 per cent. In addition, 2.7 per cent of the plants reported that they have been successful in having women workers in hazardous occupations wear their hair closely cropped or with close-fitting "safety" hair-dos.